Compact Disc Recorder

Operating Instructions

RCD-W7V

© 2002 Sony Corporation
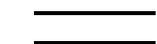
WARNING

**To prevent fire or shock hazard, do not expose the unit to rain or moisture.
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.**

CAUTION

The use of optical instruments with this product will increase eye hazard. As the laser beam used in this Compact Disc Recorder is harmful to eyes, do not attempt to disassemble the cabinet.
Refer servicing to qualified personnel only.

CAUTION

VISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED.
DO NOT STARE INTO BEAM.

This label is located on the rear panel of your recorder.

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
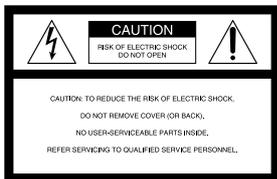
This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEP-TACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

For customers in the U.S.A

Owner's Record

The model and serial numbers are located at the rear of the unit. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. RCD-W7V
Serial No._____

CAUTION

You are cautioned that any change or modifications not expressly approved in this manual could void your authority to operate this equipment.

INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Welcome!

Thank you for purchasing the Sony Compact Disc Recorder. Before operating the recorder, please read this manual thoroughly and retain it for future reference.

Precautions

On safety

- If anything falls into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- The unit is not disconnected from the AC power source as long as it is connected to the mains outlet, even if the unit itself has been turned off.
- Unplug the unit from the wall outlet if you do not intend to use it for an extended period of time. To disconnect the cord, pull it out by the plug, never by the cord.
- Caution – The use of optical instruments with this product will increase eye hazard.
- Should any solid object or liquid fall into the cabinet, unplug the recorder and have it checked by qualified personnel before operating it any further.
- AC power cord must be changed only at a qualified service shop.

On cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

On your TV's color

If the speakers should cause the TV screen to have color irregularity, turn off the TV at once then turn it on after 15 to 30 minutes. If color irregularity should persist, place the speakers further away from the set.

IMPORTANT NOTICE

Caution: This recorder is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen. Projection televisions are especially susceptible to this.

On placement

- Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.
- Allow adequate air circulation to prevent internal heat buildup.
- Do not place the unit on surfaces (rugs, blankets, etc.) that may block the ventilation slots.
- Do not install the unit near heat sources such as radiators, or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration, or shock.
- Do not install the unit in an inclined position. It is designed to be operated in a horizontal position only.
- Keep the unit and discs away from equipment with strong magnets, such as microwave ovens, or large loudspeakers.
- Do not place heavy objects on the unit.
- Place the recorder in a location with adequate ventilation to prevent heat build-up in the recorder.
- Do not block the ventilation slots by putting anything on the recorder. If the ventilation slots on the bottom surface are blocked, the unit can overheat and malfunction.
- Do not place the recorder on a soft surface such as a rug that might block the ventilation holes on the bottom.
- Do not place the recorder in a location near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.

On operation

- If the recorder is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the recorder. Should this occur, the recorder may not operate properly. In this case, remove the disc and leave the recorder turned on for about half an hour until the moisture evaporates.
- When you move the player, take out any discs. If you don't, the discs may be damaged.
- If you have any questions or problems concerning your recorder, please consult your nearest Sony dealer.

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Table of Contents

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About this Manual

- Instructions in this manual describe the controls on the remote. You can also use the controls on the recorder if they have the same or similar names as those on the remote.
- The icons used in this manual are explained below:

Icon	Meaning
DVD	Functions available in DVD video mode
CD	Functions available in Audio CD mode
CD-R/RW	Functions available in Audio CD-R/RW mode
💡	More convenient features

This Recorder Can Use the Following Discs

This recorder can use four types of discs as follows:

DVD VIDEO Discs with the logo left (**DVD VIDEO**) can be played only in DECK A (the DVD player section).

Discs with the logo above (**Audio CD**) can be played by both DECK A (the CD/DVD player section) and DECK B (the CD-R or CD-RW recorder section).

Discs with the logo above (**Audio CD-R**) are recordable only one time. When you finalize (page 51) the disc, you can play it in either DECK A (the CD/DVD player section) or DECK B (the CD-R or CD-RW recording section), and you can play it in any conventional CD player, including home, car, and portable models. When you buy a CD-R disc, please note that you must buy an audio CD-R disc. A CD-R disc designed for computer use will not work in the recorder.

Discs with the logo above (**AUDIO CD-RW**) are recordable, and also re-writable. You can play this type of disc only in DECK B (the CD-R or CD-RW recording section), or CD-RW compatible players. They will not play back in most current CD players unless the player is CD-RW compatible.
When you buy a CD-RW disc, please note that you must buy an audio CD-RW disc. A CD-RW disc designed for computer use will not work in the recorder.

Terms for discs

- **Title**
  The longest sections of a picture or a music piece on a DVD; a movie, etc., for a picture piece on a video software; or an album, etc., for a music piece on an audio software. Each title is assigned a title number enabling you to locate the title you want.
- **Chapter**
  Sections of a picture or a music piece that are smaller than titles. A title is composed of several chapters. Each chapter is assigned a chapter number enabling you to locate the chapter you want. Depending on the disc, no chapters may be recorded.
- **Track**
  Sections of a picture or a music piece on a CD. Each track is assigned a track number enabling you to locate the track you want.
- **Index (CD)**
  A number that divides a track into sections to easily locate the point you want on a CD. Depending on the disc, no indexes may be recorded.

DVD structure

Disc
Title
Chapter

CD structure

Disc
Track
Index

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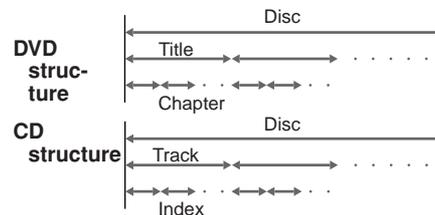
Region code

Your recorder has a region code printed on the back of the unit and will only play DVDs labelled with the same region code.

DVDs labelled ⊕ will also play on this recorder. If you try to play any other DVD, the message "Check Regional Code" will appear on the TV screen. Depending on the DVD, no region code indication may be labelled even though playing the DVD is prohibited by area restrictions.

Examples of discs that the recorder cannot play

The recorder cannot play the following discs:
• CD-ROMs (PHOTO CDs included) except MP3 files
• All CD-Rs other than music
• Video CD
• Data part of CD-Extras
• DVD-ROMs
• DVD Audio discs
• A DVD with a different region code (page 7, 60).
• A disc recorded in a color system other than NTSC, such as PAL or SECAM (This player conforms to the NTSC color system).
• A disc that has a non-standard shape (e.g., card, heart)
• A disc with paper or stickers on it.
• A disc that has the adhesive, cellophane tape, or a sticker still left on it.

Note

Some CD-Rs or CD-RWs cannot be played on this recorder depending upon the recording quality or physical condition of the disc, or the characteristics of the recording device.
Furthermore, the disc will not be played if it has not been correctly finalized. For more information, see the operating instructions for the recording device.

Note on playback operations of DVDs

Some playback operations of DVDs may be intentionally set by software producers. Since this recorder plays DVDs according to the disc contents the software producers designed, some playback features may not be available. Also, refer to the instructions supplied with the DVDs.

Copyrights

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents, other intellectual property rights owned by Macrovision Corporation, and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

This recorder incorporates Dolby* Digital, Pro Logic Surround, and the DTS** Digital Out System.

* Manufactured under license from Dolby Laboratories.
  "Dolby", "Pro Logic", and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. © 1992-1997 Dolby Laboratories. All rights reserved.
** "DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.

Notes about the Discs

On handling discs

- To keep the disc clean, handle the disc by its edge. Do not touch the surface.

- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as the temperature may rise considerably inside the car.
- After playing, store the disc in its case.

On cleaning

- Before playing, clean the disc with a cleaning cloth.
  Wipe the disc from the center out.

- Do not use solvents such as benzine, thinner, commercially available cleaners, or anti-static spray intended for vinyl LPs.

Note on High-Speed CD to CD-R or CD-RW Synchro-Recording

Certain CD conditions may cause sound dropout or noise in the recording results, or even create unwanted tracks on the CD-R or CD-RW. If this happens, clean the CD as instructed in "On cleaning" (page 8), and record material to the CD-R or CD-RW using normal-speed CD to CD-R or CD-RW Synchro-Recording only.

Note on CD-R or CD-RW playback

When you playback a CD-R or CD-RW recorded by a CD-R or CD-RW recorder, you may not be able to playback, depending on the recording conditions (e.g., dirty disc, etc.). Also, you should note that you need to finalize a CD-R or CD-RW before playing back on another system other than the one used to make the recording. (Finalizing is a process to complete the recording.)
After finalizing a CD-R disc, you can play it in any conventional CD player. However, depending on the state of the recording, there may be sound skips during playback.
After finalizing a CD-RW disc, you can play it in a CD-RW compatible player only.

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Index to Parts and Controls

For more information, refer to the pages indicated in parentheses.

Front Panel

1 POWER switch (23)
2 ⏏ (open/close)-Deck A (23)
3 ▷ (play)-Deck A (23)
4 AMS ◁◁ /▷▷-Deck A (24)
5 DVD MENU (27)
6 Disc tray-Deck A (23)
7 Disc sort indicator
8 Disc tray-Deck B (23)
9 AMS ◁◁ /▷▷-Deck B (24)
10 ⏏ (open/close)-Deck B (23)
11 ● (record)-Deck B (48)
12 REC LEVEL control-Deck B (49)
13 ❚❚ (pause)-Deck B (24)
14 ■ (stop)-Deck B (24)
15 ▷ (play)-Deck B (23)

16 INPUT select (48)
17 TIME (50)
18 ERASE (52)
19 FINALIZE (51)
20 CD SYNCHRO (NORMAL/HIGH)
    (46, 47)
21 DISPLAY
22 ▥ (remote sensor)
23 ⤺ RETURN (22)
24 Arrow(←/↑/↓/→)/PUSH ENTER (27)
25 DISPLAY (31)
26 TITLE (27)
27 ■ (stop)-Deck A (24)
28 ❚❚ (pause)-Deck A (24)
29 Headphone jack (24)
30 Headphone level control (24)
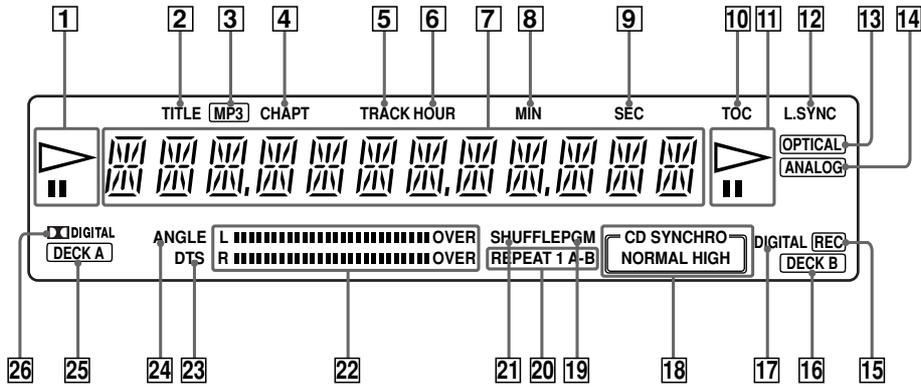
Front Panel Display

1. Play/pause (Deck A)
2. Current title number
3. MP3
4. Current chapter number
5. Current track number
6. Hours
7. Information Displays
8. Minutes
9. Seconds
10. TOC
11. Play/pause (Deck B)
12. LEVEL SYNCH
13. Optical
14. Analog
15. Recording
16. DECK B
17. Digital recording
18. CD Synchro dubbing speed (NORMAL/HIGH)
19. Program
20. Repeat play mode
21. Shuffle play
22. Audio level meter
23. DTS mode
24. Angle
25. DECK A
26. Dolby Digital

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Rear Panel

[1] VIDEO OUT SELECT switch (16)
[2] S-VIDEO OUT jack (16)
[3] VIDEO OUT jack (15)
[4] COMPONENT VIDEO OUT jacks (16)
[5] ANALOG IN (L/R) jacks (20)

[6] ANALOG OUT (L/R) jacks (15)
[7] DIGITAL IN (OPTICAL) (20)
[8] DIGITAL OUT (OPTICAL) (17, 18)

11US
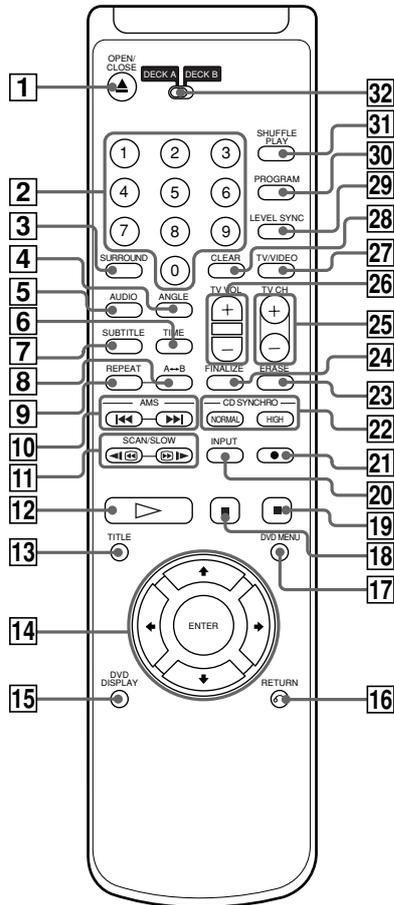
Remote

Notes

- This remote control glows in the dark. However, before glowing, the remote must be exposed to light for awhile.
- TV VOL, TV CH and TV/VIDEO buttons is operated only for SONY TV.

1 OPEN/CLOSE (23)
2 Number buttons (28)
3 SURROUND (33)
4 ANGLE (33)

5 AUDIO (31)
6 TIME (25)
7 SUBTITLE (32)
8 A←→B REPEAT (30)

9 REPEAT (29)
10 AMS(Auto Music Sensor) ⏮/⏭ (24)
11 SCAN/SLOW (◀❚◀◀ / ▶▶❚▶) (38)
12 ▷ PLAY/SELECT (23)

13 TITLE (27)
14 ←/↑/↓/→/ENTER (27)
15 DVD DISPLAY (21)
16 ⮐ RETURN (22)

17 DVD MENU (27)
18 ❚❚ PAUSE (24)
19 ■ STOP (24)
20 INPUT (49)

21 ● RECORD (48)
22 CD SYNCHRO (NORMAL/HIGH) (46, 47)
23 ERASE (52)
24 FINALIZE (51)

25 TV CHANNEL (+/-) (54)
26 TV VOLUME (+/-) (54)
27 TV/VIDEO (54)
28 CLEAR (28)

29 LEVEL SYNC (49)
30 PROGRAM (28)
31 SHUFFLE PLAY (30)
32 DECK A/B selector (23)

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Quick Overview

This chapter presents a quick overview so you can begin enjoying your new recorder right away.
For selecting a language used in the on-screen display, refer to the page 41.
For selecting the aspect ratio of the TV to be connected, refer to the page 43.

Unpacking

Check that you have the following items:
• Video cord (1)
• Audio cords (2)
• Remote commander (remote) RM-R70 (1)
• R6 (size AA) batteries (2)

Inserting Batteries into the Remote

You can control the recorder using the supplied remote. Insert two R6 (size AA) batteries by matching the ⊕ and ⊖ ends on the batteries to the markings inside the compartment. When using the remote, point it at the remote sensor 🅁 on the recorder.
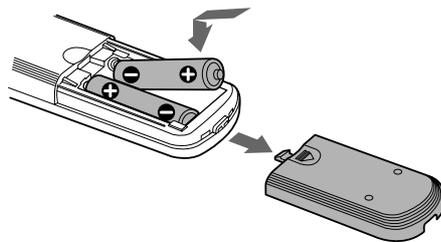
Notes

• Do not leave the remote in an extremely hot or humid place.
• Do not use a new battery with an old one.
• Do not drop any foreign object into the remote casing, particularly when replacing the batteries.
• Do not expose the remote sensor to direct light from the sun or lighting apparatus. Doing so may cause a malfunction.
• If you do not use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Hooking Up the Recorder

This section describes how to hook up this recorder to a TV (with audio/video input jacks) and/or amplifier. You can not connect this recorder to a TV without a video input connector. **Be sure to turn off the power of each component before making the connections.**

Required cords

Video cord for connecting a TV monitor (supplied)

Yellow ⊏▭▭▭————————▭▭▭⊐ Yellow

Audio cords (supplied)

When connecting a cord, be sure to match the color-coded pins to the appropriate jacks on the components.

White (L/audio) ⊏▭▭▭————▭▭▭ White (L/audio)

Red (R/audio) ⊏▭▭▭————▭▭▭ Red (R/audio)

Optical cord (not supplied)

⊏▭▭▭————————▭▭▭⊐

Video cord for connecting a TV monitor with component jacks (not supplied)

Blue (Pb) ⊏▭▭▭————▭▭▭ Blue (Pb)

Red (Pr) ⊏▭▭▭————▭▭▭ Red (Pr)

Green (Y) ⊏▭▭▭————▭▭▭ Green (Y)

14^{US}
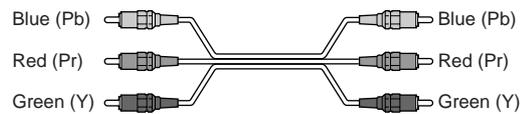
Connecting to a TV or an audio system

Compact Disc Recorder

To VIDEO OUT   To AUDIO OUT (L/R)   To an AC outlet

Audio system

To audio input (L/R)

OR

TV

To audio input (L/R)

To video input

To an AC outlet

⟶ : Signal flow
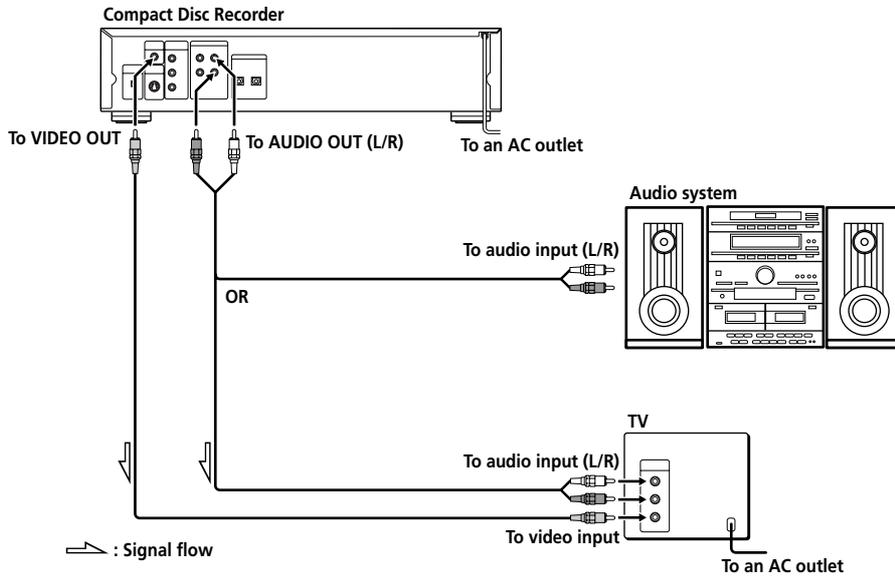
Connect a	To the
TV monitor	VIDEO OUT and ANALOG OUT (L/R) jack
audio system	AUDIO OUT (L/R) jack

Note

• Do not connect this recorder to a video deck. If you view the pictures on your TV after making the connections shown on the right, a picture noise may appear.

| VCR | | TV |

Compact Disc Recorder

Connect directly

Getting Started (vertical text on right margin)
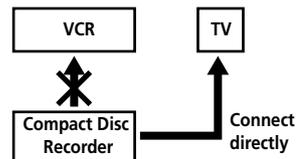
Connecting to a TV equipped with an S-video jack

Compact Disc Recorder

Video Output
Select Switch

To S-VIDEO OUT

To an AC outlet

TV with S-video jack

To s-video input jack

To an AC outlet

⟶ : Signal flow
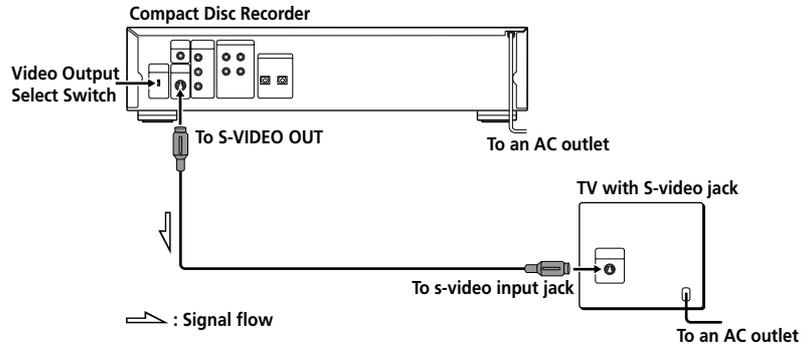
Connect a	To the
TV monitor with a S-video jack	S-VIDEO OUT jack

Connecting to a TV equipped with a component video iput connectors

Compact Disc Recorder

Video Output
Select Switch

To COMPONENT
VIDEO OUT (Pb/Pr/Y)

To an AC outlet

TV with componet video
input connectors

To component input
jacks (Pb/Pr/Y)

To an AC outlet

⟶ : Signal flow
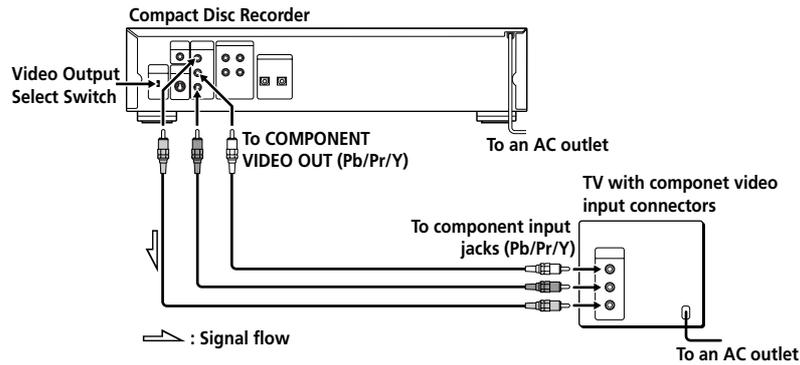
Connect a	To the
TV monitor with a component video input connectors	COMPONENT VIDEO OUT jacks

◌̈ When using the S-video jack instead of the video jacks
Your TV monitor must also be connected via an S-video jack. S-video signals are on a separate bus from the video signals and will not be output through the video jacks.

◌̈ Video Out Select switch
For using COMPONENT VIDEO OUT jack, set the "VIDEO OUT SELECT" switch to "COMPONENT" or for using S-VIDEO OUT jack, set the "VIDEO OUT SELECT" switch to "S-VIDEO".

◌̈ When you are connecting the monitor, projector, or AV amplifier (receiver) having component video input jacks (Y, P_B, P_R)
Connect the component via the COMPONENT VIDEO OUT jacks using a component video cord (not supplied) or three video cords (not supplied) of the same kind and length. You will enjoy accurate color reproduction and high quality images.

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Connecting to a TV and an amplifier with Digital In jack
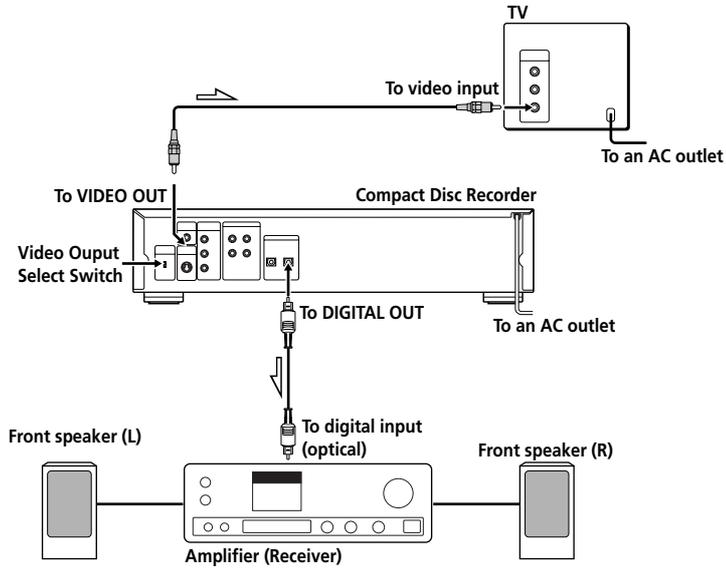
TV

To video input

To an AC outlet

To VIDEO OUT

Compact Disc Recorder

Video Ouput
Select Switch

To DIGITAL OUT

To an AC outlet

Front speaker (L)

To digital input
(optical)

Front speaker (R)

Amplifier (Receiver)

⟶ : Signal flow

Connect a	To the
TV monitor	VIDEO OUT jack
Amprifier with a digital output (optical) jack	DIGITAL OPTICAL OUT jack

ö Set the setup menu correctly after connecting
Set the "Digital Audio Output" of the setup menu to PCM.

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Connecting to a TV and an AV receiver equipped with a Dolby Digital or DTS decoder
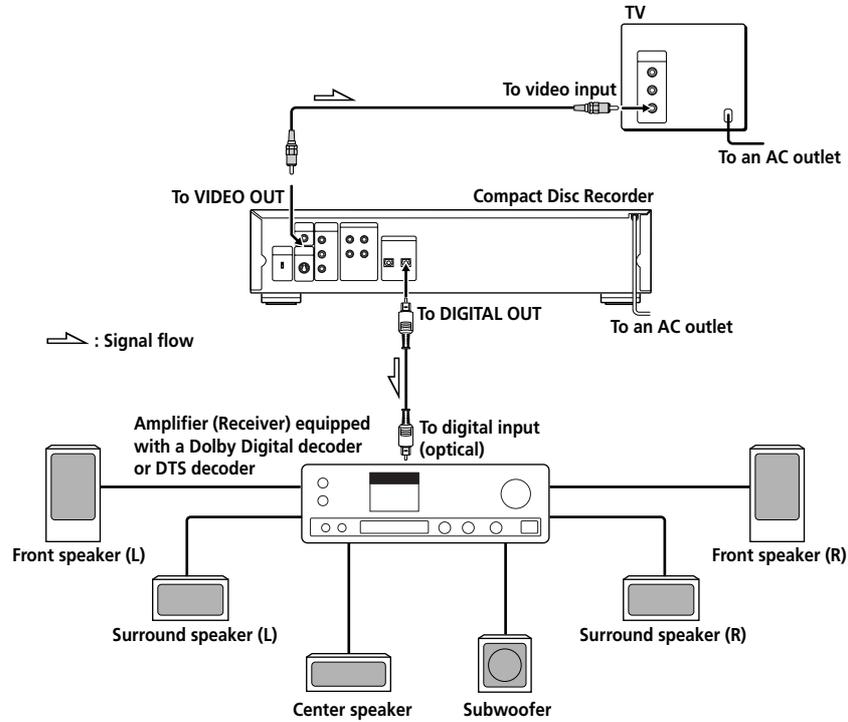
TV

To video input

To an AC outlet

To VIDEO OUT

Compact Disc Recorder

To DIGITAL OUT

To an AC outlet

: Signal flow

Amplifier (Receiver) equipped
with a Dolby Digital decoder
or DTS decoder

To digital input
(optical)

Front speaker (L)

Front speaker (R)

Surround speaker (L)

Surround speaker (R)

Center speaker

Subwoofer

Connect a	To the
TV monitor	VIDEO OUT jack
Amprifier with a digital output (optical) jack	DIGITAL OPTICAL OUT jack

When this recorder is connected an amplifier (receiver) equipped with Dolby Digital decoder
Set the "Digital Audio Output" of the setup menu to "DOLBY DIGITAL/PCM".

When this recorder is connected an amplifier (receiver) equipped with DTS decoder
Set the "Digital Audio Output" of the setup menu to "Stream/PCM".

Note

- When connecting an amplifier (receiver) not equipped with a Dolby Digital or DTS decoder using an optical cord, do not select "DOLBY DIGITAL/PCM" or "Sream/PCM" in the "Digital Audio Output" of the setup menu.
 Merely attemping to play a DVD may cause a screeching noise which could be harmful to your ears and damage the speakers. In such a case, be sure to select "PCM" in the "Digital Audio Output".

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Connecting to a TV and an AV receiver equipped with the Dolby Pro Logic Surround system

TV

To video input

To an AC outlet

To VIDEO OUT   Compact Disc Recorder

To AUDIO OUT (L/R)   To an AC outlet

➞ : Signal flow

Amplifier (Receiver)
equipped with a Dolby
Pro Logic Surround   To audio input (L/R)

Front speaker (L)   Front speaker (R)

Surround speaker (L)   Surround speaker (R)

Subwoofer
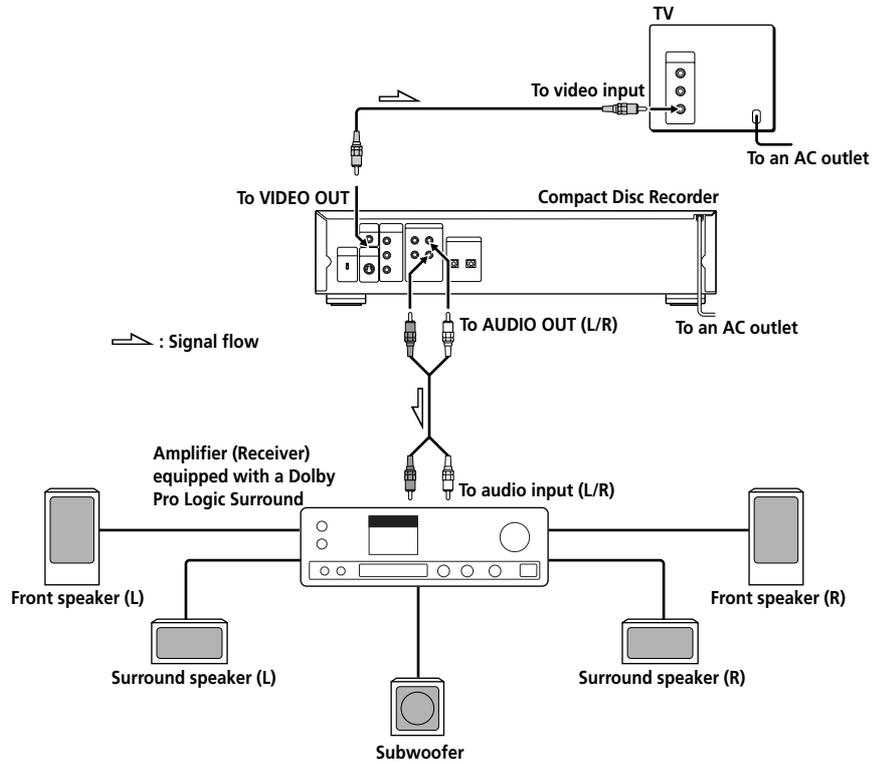
Connect a	To the
TV monitor	VIDEO OUT jack
Amprifier with the Dolby Pro Logic Surround system	AUDIO OUT (L/R) jack

ʓ **When this recorder is connected an amplifier (receiver) equipped with the Dolby Pro Logic Surround system**
Set the "Digital Audio Output" of the setup menu to "DOLBY DIGITAL/PCM".

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Connecting to make reccordings from external source

Compact Disc Recorder

To AUDIO IN (L/R)   To DIGITAL IN

To audio output (L/R)   To digital output
                           (optical)

TAPE
rec/out
play/in   optical
                 rec/out play/in

Amplifier (Receiver)

➡ : Signal flow
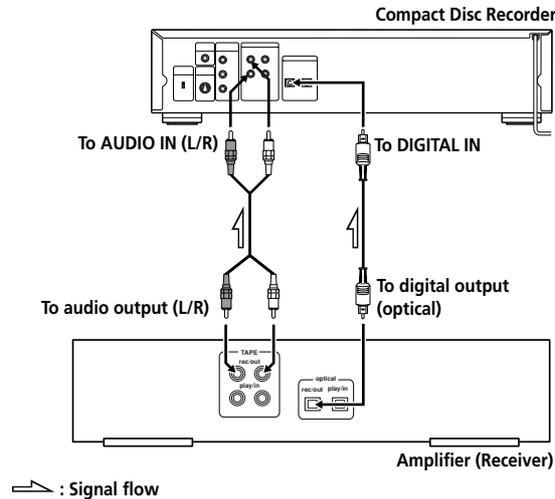
Connect a	To the
Amprifier (Receiver)	ANALOG IN (L/R) jacks or DIGITAL OPTICAL IN jack

💡 Input jacks
ANALOG: Connect the ANALOG IN (L/R) jacks to the TAPE rec/out on your receiver or processor.
OPTICAL: Connect the DIGITAL OPTICAL IN jack to the optical rec/out jack on your receiver or processor.

💡 To make recordings from external digital sources
• If your receiver does not have digital output jacks, you may connect the DIGITAL OPTICAL IN jack on the
  recorder directly to the optical rec/out jacks on your CD player or other digital devices.
• If the CD player has both types of outputs, you may connect one to the input of your receiver and the other
  directly to the unit.

Notes on digital optical connections
• Use a commercially available optical fibre cable.
• To ensure proper connection of optical cable, fully insert it into the jack until there is an audible click.
• Remember to save the plastic dust caps that cover the optical jacks, and replace them when a jack is not in use to
  prevent dust from entering the connection point.

Connecting the AC Power Cord

Connect the AC power cord to a wall outlet.

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Guide to the Control Menu Display

Use the Control Menu to select a function that you'd like to use. The Control Menu display appears when the DVD DISPLAY button is pressed. For details, refer to the page in parentheses.

Control Menu

Control Menu items

Icon of selected
Control Menu item

Playback status
(►Playback, ❚❚Pause,
■Stop, etc.)
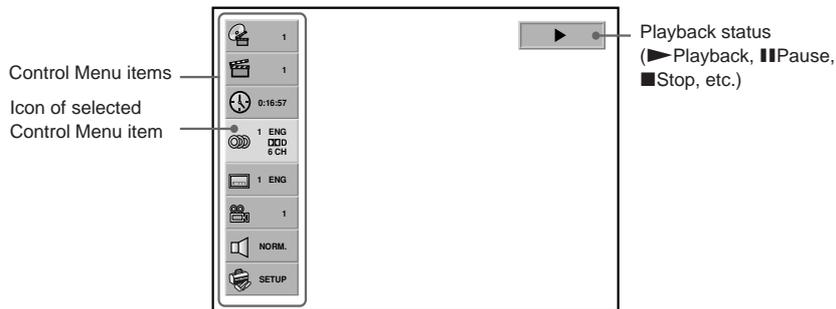
List of Control Menu Items

TITLE (DVD only) (page 39)	Selects the title (DVD).	
CHAPTER (DVD only) (page 39)	Selects the chapter (DVD) to be played.	
TIME (page 39)	Checks the elapsed time and the remaining playback time. Inputs the time code for picture searching. Displays the DVD.	
AUDIO (page 31)	Changes the audio setting.	
SUBTITLE (DVD only) (page 32)	Displays the subtitles. Changes the subtitle language.	
ANGLE (DVD only) (page 33)	Changes the angle.	
SURROUND (page 33)	Changes the sound setting.	
SETUP (page 40)	By using the Setup Display, you can make various adjustments to items such as picture and sound. You can also set a language for the subtitles and the Setup Display, among other things.	

Each time you press DVD DISPLAY, the Control Menu display changes as follows:

Control Menu display
↓
Control Menu display off
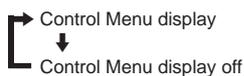
The Control Menu items are different depending on the disc.

Necessary Setup Before Using the Recorder

Some setups are necessary for the recorder depending on the TV or other components to be connected.
For details on using the setup display, see page 40.
For details on each setup display item, see page 40 to 45.

■ **To connect the recorder to a wide-screen TV**
  In the setup display, set "TV ASPECT" in "SETUP" to "16:9."

■ **To connect the recorder to a normal TV**
  In the setup display, set "TV Aspect" to "4:3 Letterbox" or "4:3 Panscan" in the setup display. For details, see page 43.

■ **To listen to the sound through speakers connected to an amplifier with a digital connector or to output the sound to a digital component such as a DAT or MD deck**
  When you play a DVD, set "Digital Audio Output" to "PCM" or "Stream/PCM" in the setup display. For details, see page 45.

■ **To connect the recorder to an audio component with a built-in Dolby Digital decoder**
  In the setup display, "Digital Audio Output" to "Dolby Digital/PCM".

Use the setup display to change the various settings for the picture and sound.
For details, see page 40.

Selecting the Language for On-Screen Display

You can select the language for the display or the messages displayed on the screen. Default setting is "ENGLISH."

DVD DISPLAY

↑/←/→/↓
RETURN
ENTER
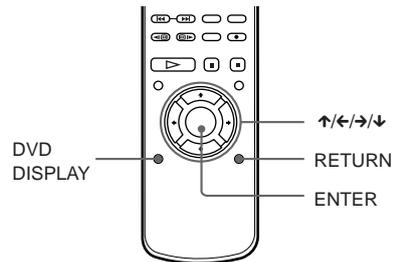
1 Press DVD DISPLAY and select SETUP using ↑/↓, and then press ENTER.

SETUP

2 Select the Menu Language using ↑/↓, then press →.

Disc Audio	▶English
Disc Subtitle	Spanish
Disc Menu	French
Menu Language	

3 Select the language you want using ↑/↓, then press ENTER.

Disque Audio	Anglais
Sous Titre Du Disque	Espagnol
Menu De Disque	✓Français
Langage Menu	

To cancel using the setup display on the way
Press RETURN.

Note

The languages you can select are the ones displayed in step 2. For details, see page 41.

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Playing Discs

DVD CD CD-R/RW

This recorder has two decks. When using the remote, set DECK A/B switch to DECK A for operations on DECK A (the CD/DVD player section), or to DECK B for operations on DECK B (the CD-R or CD-RW recording section).
In this manual, the CD/DVD player section is just called DECK A, and the CD-R and CD-RW recording section is called DECK B.

POWER   OPEN/CLOSE ⏏

AMS |◀◀/▶▶|

Connect
headphones   ▷

OPEN/
CLOSE   DECK A/B
                              Switch

▷   ■
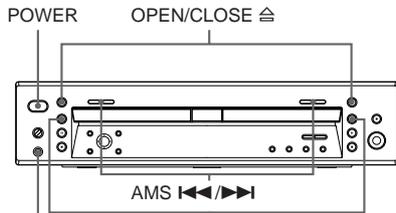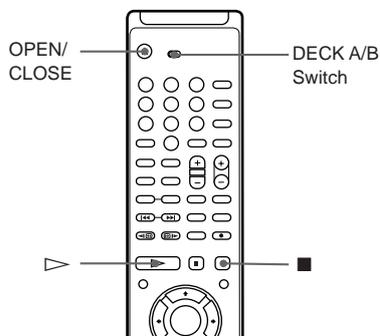
1 Turn on the TV and amplifier.

2 Switch the input selector on the TV and amplifier.

3 Press POWER on the recorder.

4 Press ⏏ and place a disc on the disc tray of DECK A (or B). Press ⏏ again to close the disc tray.
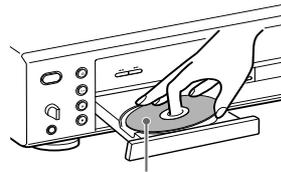
With the playback side facing down

5 Press ▷.
The recorder starts playing. Adjust the volume on the amplifier or the TV.

After following Step 5

Depending on the disc, a menu may appear on the TV screen. You can play the disc interactively by following the instructions on the menu. DVD (page 27).

To turn off the recorder

To turn off the recorder, press POWER on the recorder. While playing a disc, do not turn off the recorder by pressing POWER. Doing so may cancel the menu settings. When you turn off the recorder, first press ■ to stop playback and then press POWER on the recorder.

About the ⃠ symbol display
- The ⃠ symbol will be displayed on the screen if you press a button which cannot be used or enter an incorrect number.
- Some DVD discs may have places where they do not allow pressing of the STOP, SKIP, or other buttons. The ⃠ mark will be displayed on the screen if you press a button that is not allowed in such a place.

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Playing Discs

Additional operations

OPEN/CLOSE

|◄◄/►►|

▷

■

▮▮

To	Operation
Stop	Press ■.
Pause	Press ▮▮.
Resume play after pause	Press ▷.
Go to the next chapter, track, or scene in continuous play mode	Press AMS ►►|.
Go back to the preceding chapter, track, or scene in continuous play mode	Press AMS |◄◄.
Take out the disc	Press ⏏ on DECK A or B, which ever contains the disc you want to remove after stopping play. Set the DECK A/B switch to DECK A or B and press the OPEN/ CLOSE (⏏) (use the remote control).

*AMS: Automatic Music Sensor

Notes

- If there is no disc in any disc tray, "NO DISC" appears on the front panel display.
- You can play unfinalized CD-RW discs only in DECK B. If you attempt to play an unfinalized disc in the DECK A, a DISC ERROR message will appear to remind you to play the disc in DECK B. For the detailed explanation about finalizing, see "Finalizing a CD-R or CD-RW disc" on page 51.
- At the end of a listening session, remove the discs from the decks by following the instructions in step 4. Do not leave the disc tray open when the unit is not in use to prevent dust and dirt from entering the unit and to prevent damage to the disc tray.

Headphone jack and Headphone Level control

Connect standard headphones (ø 6.3mm) to headphone jack for private listening. Turn headphone level control to adjust the volume level to the headphones.

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# Viewing the Playing Time and Remaining Time on the Front Panel Display

DVD   **CD**   **CD-R/RW**

You can check information about the disc, such as the remaining time, total number of titles of a DVD, or tracks of a CD, using the front panel display.
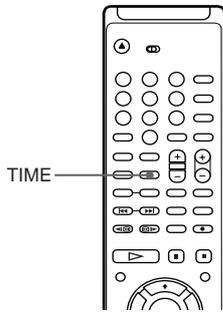
TIME

Press TIME.

Each time you press TIME while playing the disc, the display changes as shown in the following charts.

When playing a DVD

Playing time and number of the current title

| TITLE | CHAPT | HOUR | MIN | SEC |
| 1 | 2 | 1,03,24 |

Remaining time of the current title ↓

| TITLE | CHAPT | HOUR | MIN | SEC |
| 1 | 2 | -- 1,15,36 |

Remaining time of the current chapter ↓

| CHAPT | HOUR | MIN | SEC |
| 2 | -- 0,13,20 |

When playing a CD

Playing time and current track number

| TRACK | MIN | SEC |
| 2 | 2,25 |

Remaining time of the current track ↓

| TRACK | MIN | SEC |
| 2 | -- 1,50 |

Remaining time of the disc ↓

| MIN | SEC |
| -- 32,12 |

💡 **The playing time and remaining time of the current chapter, title, track, scene, or disc will also appear on your TV screen.**

Note

- Depending on the type of disc being played and the playing mode, the disc information may not be displayed.

Playing Discs

Resuming Playback from the Point Where You Stopped the Disc (Resume Play)

DVD

When you stop the disc, the recorder remembers the point where you pressed ■ and "■ (RESUME)" appears on the TV screen. Press ▷ and play will resume from this point.

1 While playing a disc, press ■ to stop playback.

"■ (RESUME)" appears on the TV screen, so you can restart the disc from the point where you stopped the disc.
If "■ (RESUME)" does not appear, Resume Play is not available.

2 Press ▷.

The recorder starts playback from the point where you stopped the disc in Step 1.

ᯤ **To play from the beginning of the disc, press ■ twice, then press ▷.**
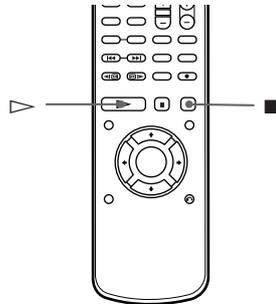
ᯤ **This player memorizes last scene for the last disc you have watched. Settings remain in memory even if you remove the disc from the player or switch off the recorder. If you load a disc that has its settings memorized, the "Resume disc from last position?" message will appear on the TV screen. If you want to restart the disc from the point where you stopped the disc, select "Yes" and then press ENTER. Latest Stop Position is recalled.**

Note

- Depending on where you stopped the disc, the recorder may not resume playback from exactly the same point.
- The point where you stopped playing is cleared when:
  – Press ■ in the STOP mode.

Using the DVD's Menu

DVD

Some discs have a "Title menu" or a "DVD Menu." On some DVDs, this may simply be called a "Menu" or "Title."

Using the title menu

A DVD is divided into long sections of a picture or a music feature called "titles." When you play a DVD which contains several titles, you can select the title you want using the title menu.

Number buttons

TITLE

←/↑/↓/→
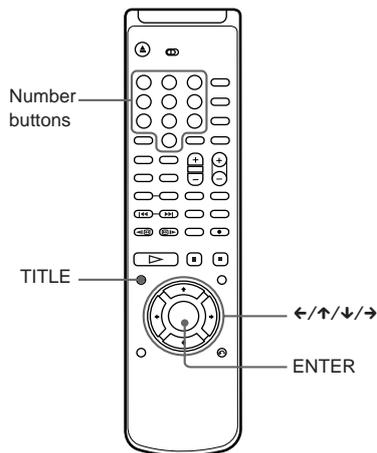
ENTER

1 Press TITLE.

The title menu appears on the TV screen. The contents of the menu vary from disc to disc.

2 Press ←/↑/↓/→ or the number buttons to select the title you want to play.

3 Press ENTER.

The recorder starts playing the selected title.

Using the DVD menu

Some DVDs allow you to select the disc contents using a menu. When you play these DVDs, you can select items such as the language for the subtitles and the language for the sound using the DVD menu.

Number buttons

DVD MENU

←/↑/↓/→
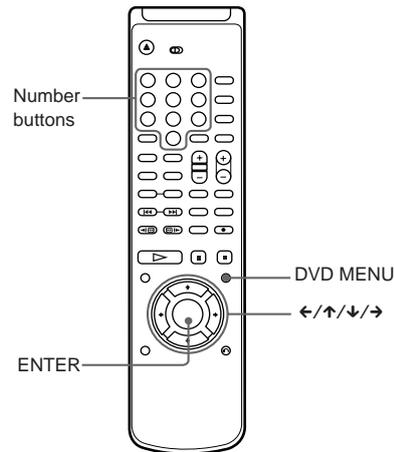
ENTER

1 Press DVD MENU.

The DVD menu appears on the TV screen. The contents of the menu vary from disc to disc.

2 Press ←/↑/↓/→ or the number buttons to select the item you want to change.

3 To change other items, repeat Step 2.

4 Press ENTER.

ϔ You can also display the DVD menu by pressing DVD MENU on the player.

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Creating Your Own Program (Program Play)

CD   **CD-R/RW**

You can play the contents of a disc in the order you want by arranging the order of the tracks on the disc to create your own program. You can program up to 20 tracks.

Number buttons
PROGRAM
CLEAR
AMS ⏮/⏭
▷
←/↑/↓/→ (using Deck A)
ENTER
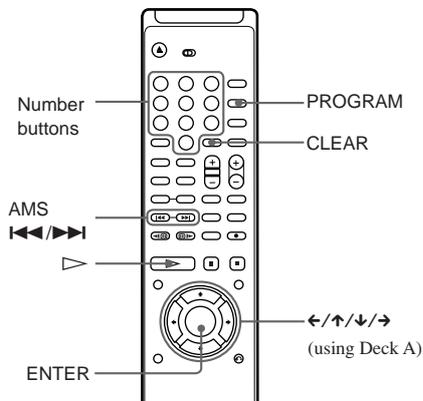
1 During playback or in stop mode, press PROGRAM.

The programming display appears on the TV screen and PGM indicator lights in the front panel display.

Program					Deck A
↻	↻	↻	↻	↻	Step 1 Total Time 00:00
↻	↻	↻	↻	↻	
↻	↻	↻	↻	↻	
↻	↻	↻	↻	↻	Clear All
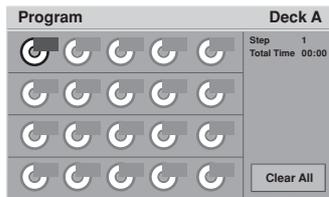
2 Press the number button(s) to select the desired track number.

Program					Deck A
↻	↻	↻	↻	↻	Step 1 Total Time 03:10
↻	↻	↻	↻	↻	
↻	↻	↻	↻	↻	
↻	↻	↻	↻	↻	Clear All
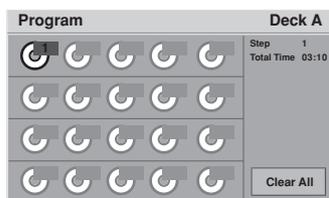
3 To move next column, press → (using Deck A) or AMS ⏮/⏭.

Program					Deck A
↻	◼	↻	↻	↻	Step 2 Total Time 03:10
↻	↻	↻	↻	↻	
↻	↻	↻	↻	↻	
↻	↻	↻	↻	↻	Clear All
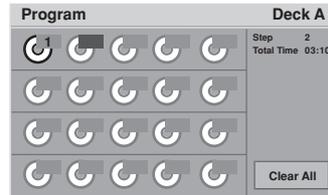
4 Repeat steps 2-3 to select another track.

5 Press PLAY or ENTER to exit the screen.

The selected tracks are stored in the memory and play now begins in the programmed sequence.

Note

• If you press PROGRAM to exit the screen, the selected tracks are not memorized.

To return to normal play

Press CLEAR during Program Playback and "NORMAL" appears on the TV screen.

To change the program

To change the track, press PROGRAM and follow steps 1-4.

To cancel the programmed order

To cancel all the tracks in the programmed order, press PROGRAM, and select "CLEAR ALL" on the programming display using ←/↑/↓/→. To cancel the selected track, select the track using ←/↑/↓/→ (using Deck A) or AMS ⏮/⏭ on the programming display, then press CLEAR.

💡 **You can do Repeat Play of the programmed tracks. Press REPEAT during Program Play.**

Note

The number of tracks displayed are the same number of tracks recorded on a disc.

Playing repeatedly (Repeat Play) DVD CD CD-R/RW

You can play a title/chapter/disc/track on a disc.
In Program Play mode, the recorder repeats the titles or all tracks in the programmed order.
You may not be able to perform Repeat Play depending on the DVD.
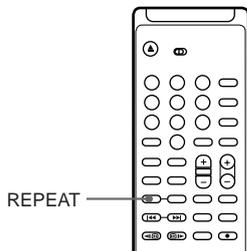
REPEAT ———

1 Press REPEAT when playing a disc.

The repeat icon appears.

2 Press REPEAT to select a desired repeat mode.

DVD: TITLE → CHAPT → OFF
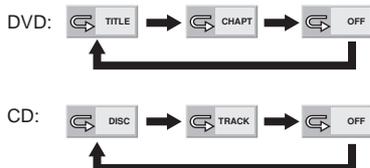
CD: DISC → TRACK → OFF

When playing a DVD
- TITLE: repeats the current title on a disc.
- CHAPTER: repeats the current chapter.
- OFF: does not play repeatedly.

When playing a CD
- DISC: repeats all the tracks on a disc.
- TRACK: repeats the current track
- OFF: does not play repeatedly.

When Program Play
- DISC: repeats all the programmed tracks
- TRACK: repeats the current track
- OFF: does not play repeatedly.

When Shuffle Play
- DISC: repeats all the tracks on a disc in random order.
- OFF: does not play repeatedly.

When playing a CD on Deck B
Each time you press REPEAT on the remote, the REPEAT indicator in the front panel display lights (disappear TV) and toggles as REPEAT, REPEAT 1, and then lights off.
- REPEAT: repeats all the tracks on a disc.
- REPEAT 1: repeats the current track
- Disappear: does not play repeatedly.

To return to normal play
Press REPEAT repeatedly until the indicator disappears .

To cancel Repeat Play
Press ■

Note

The repeat icon is diaplayed when playing a CD in the DECK A.

Playing Discs

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Repeating sections between two specific points (A-B repeat)

DVD **CD** **CD-R/RW**

You can play a specific portion of a title or track repeatedly. This function is useful when you want to do such things as memorize lyrics.

A←→B
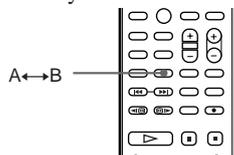
1 Press A←→B during play at the point where repeat play is to start (A).

A-B A—

You can select "OFF" at this step by pressing CLEAR.

2 Press A←→B during play at the point where repeat play is to be concluded (B).

Repeat play of the selection between points A and B starts.

A-B A— B

To return to normal play
Press CLEAR, "OFF" is displayed.

To cancel Repeat Play
Press ■.

To return to repeat play (not A-B)
Press REPEAT.

Notes

- The repeat icon is displayed when playing a CD in the DECK A.
- A-B repeat play works only within a title (DVD) or a track (CD).

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Playing in random order

(Shuffle Play) **DVD** **CD** **CD-R/RW**

You can have the system "shuffle" tracks and play them in random order. Subsequent "shuffling" may produce a different playing order.
When using the remote, set DECK A/B selector to DECK A for operations on DECK A, or to DECK B for operations on DECK B.
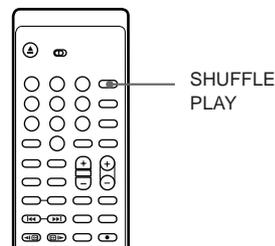
SHUFFLE PLAY

While the recorder is stopped or playing back, press SHUFFLE PLAY on the remote until "SHUFFLE" appears in the front panel display.

To stop Shuffle Play
Press ■.

Notes

- You may not be able to do Shuffle Play depending on the DVD.
- "REPEAT 1" is cancelled if you set Shuffle Play.

Changing the Sound

DVD **CD**

If the DVD is recorded with multilingual tracks, you can select the language you want while playing the DVD.
If the DVD is recorded in multiple audio format (PCM, Dolby Digital or DTS), you can select the audio format you want while playing the DVD.
With stereo CDs, you can select the sound from the right or left channel and listen to the sound of the selected channel through both the right and left speakers. (In this case, the sound loses its stereo effect.)
For example, when playing a disc containing a song with the vocals on the right and the instrument on the left channel, you can select the left channel and hear the instruments from both speakers.

AUDIO

DVD
DISPLAY

↑/↓/←/→
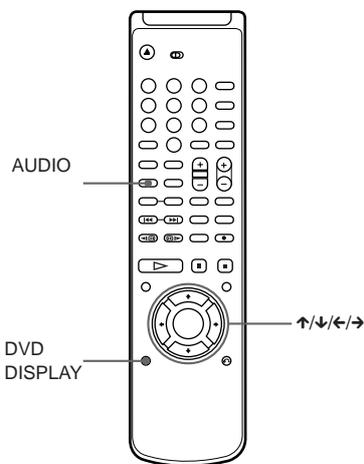
1 Press DVD DISPLAY during playback.

The Control Menu appears.

2 Press ↑/↓ to select ⌹ (AUDIO).

The audio soundtrack language appears.

3 Select the desired audio signal using ←/→ buttons.

■ **When playing a DVD**
Depending on the DVD, the choice of language varies.
When the same language is displayed two or more times, the DVD is recorded in multiple audio formats.

■ **When playing a CD**
- STEREO: The standard stereo sound.
- LEFT: The sound of the left channel (monaural).
- RIGHT: The sound of the right channel (monaural).

To turn off the Control Menu
Press DVD DISPLAY.

💡 **You can select the angle directly by pressing AUDIO. Each time you press the button, the audio soundtrack language changes.**

<u>Note</u>

Depending on the DVD, you may not be able to change the languages, even if multi-angles are recorded on the DVD.

Playing Discs

Displaying the Subtitles

DVD

If subtitles are recorded on the discs, you can turn the subtitles on and off while playing. If multilingual subtitles are recorded on the disc, you can change the subtitle language while playing, or turn the subtitles on or off whenever you want. For example, you can select the language you want to practice and turn the subtitles on for better understanding.
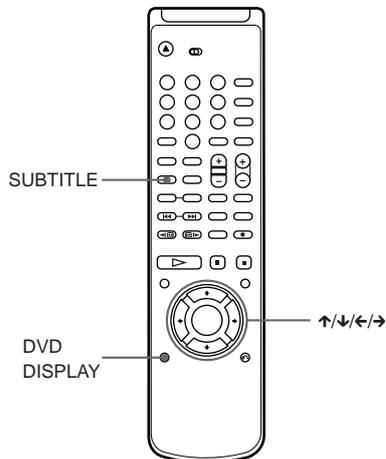
SUBTITLE

DVD
DISPLAY

↑/↓/←/→

1 Press DVD DISPLAY during playback.
The Control Menu appears.

2 Press ↑/↓ to select ☐ 1 ENG (SUBTITLE).
The language for SUBTITLE appear.

3 Press ←/→ to select the language.
Depending on the DVD, the choice of language varies.

4 Press ENTER.

To cancel the SUBTITLE setting
Select "OFF" in Step 3.

To turn off the Control Menu
Press DVD DISPLAY.

💡 You can select SUBTITLE directly by pressing SUBTITLE. Each time you press the button, the item changes.

Note

Depending on the DVD, you may not be able to change the subtitles even if multilingual subtitles are recorded on it.

Changing the Angles DVD

If various angles (multi-angles) for a scene are recorded on the DVD, "ANGLE" appears in the front panel display. This means that you can change the viewing angle.

For example, while playing a scene of a train in motion, you can display the view from either the front of the train, the left window of the train, or from the right window without having the train's movement interrupted.

ANGLE

DVD
DISPLAY

↑/↓/←/→
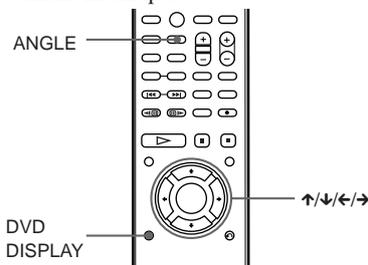
1 Press DVD DISPLAY during playback.

The Control Menu appears.

2 Press ↑/↓ to select (ANGLE).

The angle number appears.

3 Select the angle number using ←/→ buttons.

The angle is changed to the selected angle.

To turn off the Control Menu
Press DVD DISPLAY.

🔆 You can select the angle directly by pressing ANGLE. Each time you press the button, the angle changes.

Note

Depending on the DVD, you may not be able to change the angles, even if multi-angles are recorded on the DVD.

3D Surround DVD CD

This unit can produce a 3D Surround effect, which simulates multi-channel audio playback from two stereo speakers, instead of the five or more speakers normally required to listen to multi-channel audio from a home theater system.

SURROUND

DVD
DISPLAY

↑/↓/←/→
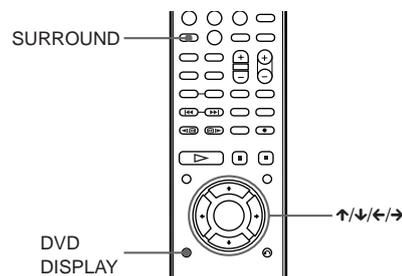
1 Press DVD DISPLAY during playback.

The Control Menu appears.

2 Press ↑/↓ to select (SURROUND).

The sound mode appears.

3 Select the desired sound mode using ←/→ buttons.

The sound mode is changed between 3D SURROUND and NORMAL.

To turn off the Control Menu
Press DVD DISPLAY.

🔆 You can select the surround directly by pressing SURROUND. Each time you press the button, the surround changes.

Notes

• This 3D Surround effect may not work for some DVD discs, such as those recorded with a mono audio soundtrack.
• Turn off the TV surround sound and other surround effects when using this 3D surround effect.

Playing Discs

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Playing MP3 Discs

The DVD Player can play MP3 format recordings on CD-ROM, CD-R or CD-RW discs.
Before playing MP3 recordings, read the following notes.

Notes on MP3

About MP3

- An MP3 file is audio data compressed by using MPEG1, the audio layer-3 file-coding scheme. We call files that have the ".mp3" file extension "MP3 files."
- The player can not read an MP3 file that has a file extension other than ".mp3."
- Noises may be heard if you play a non-MP3 file that has the ".mp3" extension.

The restriction of playing MP3

- This unit can play up to 255 files per disc. A disc having more than 255 files cannot be played files.
- This unit can also display up to 255 folders per disc on the TV screen. A disc having more than 255 folders cannot be displayed folders on the TV screen .
- The unit may not play MP3 files in the order that you recorded them on the disc.
- With a multi-session disc, the player plays the all session.
- It may take over 30 seconds to read the MP3 files, depending on the contents of the disc.

The limitation of indications

- Up to eight characters are displayed for the name of a track.
- Characters other than uppercase letters ("A" to "Z"), numericals ("0" to "9") and underscore ("_") may not be displayed, or may be displayed in different characters.
- The elapsed playing time on the display may not be correct when playing MP3 files.

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Tips on recording MP3

- To enjoy high quality sound, convert to MP3 files with a sampling frequency of 44.1kHz and a fixed bit rate of 128 kbps.

To play MP3 files in the order that you recorded them

- Writing software that is capable of recording MP3 files in numerical and alphabetical order is required.
- Include a two or three digit number at the beginning of each file name. (e.g. "01," "02," ... or "001," "002," ...)
- It's recommended that you use only the root folder (do not create a child folder under the root folder).

Note

During MP3 playing back, the recorder does not output the audio signal via the DIGITAL OPTICAL OUT jack so the audio signal is outputted only via the ANALOG OUT (L/R) jacks.

Glossary

Extension:

An extension is the last three characters that divide a file name by a period. The extension shows the attribution of the file or the software in which the file was created.

Session:

A session is one section on a disc between the beginning of data and the end of written data.
A multi-session disc has more than two sessions.

Note

Depending on the state of MP3 recording, there may be sound skips and noise during playback.

Playing MP3 Discs (Deck A only)

1 Insert a disc and close the tray.

The MP3 menu appears on the TV screen.

```
MP3              Program
 ABCD

 MP3-1
 MP3-2
 MP3-3
 MP3-4
 MP3-5
 MP3-6
 MP3-7
 MP3-8
 MP3-9            Clear All
```
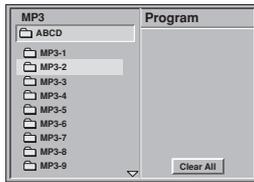
Note

It may take over 30 seconds to read the MP3 files, depending on the contents of the disc.

2 Press ↑/↓ to select the directory where MP3 files that you want to play are located and then press ENTER.

3 Press ↑/↓ to select the desired MP3 file of the selected directory on your disc then press PLAY or ENTER.

Playback starts; playback will end when all tracks of current directory have played.

```
MP3              Program
 MP3-1

 ..
 TRACK_1
 TRACK_2
 TRACK_3
 TRACK_4
✓ TRACK_5
 TRACK_6
 TRACK_7
 TRACK_8          Clear All
```
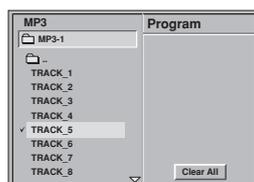
♂ To stop
Press ■ during playback.

♂ To skip to another track during playback
- Press ▶▶I or I◀◀ to play the next file or previous file during playback.
- Press ↑/↓ to select the desired MP3 file and press PLAY or ENTER.

♂ To pause playback
- Press ‖ during playback, press ▷.

♂ To move to the previous MP3 menu
- Press ↻RETURN.

♂ To move to the first MP3 menu
- Press DVD MENU.

Playing Discs

Programmed playback with MP3

Up to 60 tracks per disc can be programmed.

1 Follow steps 1 and 2 of "Playing MP3 discs" on previous page.

The MP3 menu is displayed on the TV screen.

2 Select an MP3 file to program with ↑/↓.

3 Press PROGRAM to add an MP3 file to the program list.

Repeat steps 2 to 3 to place additional tracks in the program.

MP3	Program
📁 MP3-1	TRACK_2
📁 –	TRACK_7
TRACK_1	TRACK_6
TRACK_2	TRACK_9
TRACK_3	
TRACK_4	
TRACK_5	
TRACK_6	
TRACK_7	
TRACK_8	Clear All
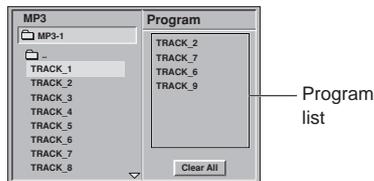
Program list

4 Press →.

The programmed track you selected last is highlighted on the program list.

5 Press ↑/↓ to select the MP3 file you want to start playing.

To select the first track on the program list, press TITLE.
Each time you press TITLE repeatedly, highlighted area moves to the first track on each page of the Program list.

6 Press ENTER or ▷.

Playback starts and will stop after playing the last programmed track on the MP3 Program list.

ϙ̈ **To clear the programs on by one**
Press ↑/↓ in step 5 to the left to delete the track from the MP3 program list, then press CLEAR.

ϙ̈ **To clear all the programs**
Press ↑/↓ in step 5 to the left to select "CLEAR All" on the MP3 program list, then press ENTER.
The program settings are also cleared when the disc is removed.

ϙ̈ **To return to the normal playback**
Press ←. Then select an directory or a desired MP3 file.

Note

- The ⟳RETURN and DVD MENU buttons do not work during programmed playback.
- If you press TITLE repeatedly during programmed playback, playback begins from the first track on each page of the program list.

Playing MP3 files repeatedly

To playback a track repeatedly
Press REPEAT once during playback.
The current track will be played back repeatedly.

Repeat symbol

To playback all tracks of current directory repeatedly
Press REPEAT twice during playback.
All of the tracks within the album will be played back repeatedly.
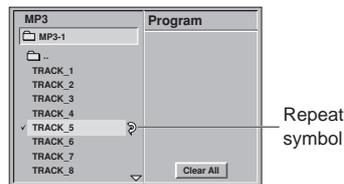
To playback a programmed track repeatedly
Press REPEAT once during programmed playback.
The current track will be played back repeatedly.
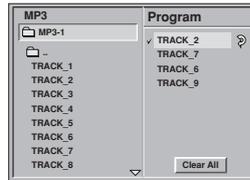
To playback all of the listed tracks repeatedly
Press REPEAT twice during programmed playback.
All of the listed tracks on the MP3 Program list will be played back repeatedly.
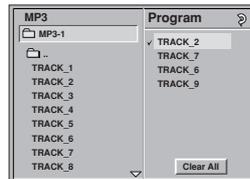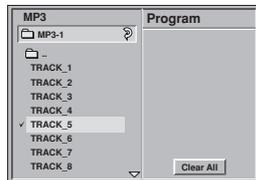
To cancel repeat playback
Press REPEAT repeatedly until the Repeat symbol disappears.

Note
• Repeat playback of one track will be cancelled if you press ►◄◄ or ►►►.

Searching for a Particular Point on a Disc (Scan, Slow-motion Play) DVD

You can locate a particular point on a disc quickly by monitoring the picture or playing back slowly.

SCAN/SLOW
◄◄ or ►►
▷
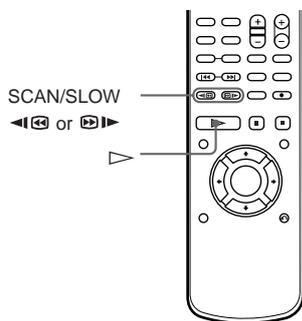
Note

Depending on the DVD, you may not be able to do some of the operations described.

Locating a point quickly by playing a disc in fast forward or fast reverse (Scan)

Press ◄◄ or ►► while playing a disc. When you find the point you want, press ▷ to return to normal speed.

Each time you press ◄◄ or ►► during scan, the playback speed changes. Three speeds are available. With each press the indication changes as follows:

Playback direction
►►X2 → ►►X4(DVD) → ►►X16(DVD)

Opposite direction
◄◄X2 → ◄◄X4(DVD) → ◄◄X16(DVD)

Watching frame by frame (Slow-motion play) DVD

You can use this function only for DVDs.

Press ◄◄ or ►► when the recorder is in the pause mode. To return to the normal speed, press ▷.

Each time you press ◄◄ or ►► during Slow-motion play, the playback speed changes. Two speeds are available. With each press the indication changes as follows:

Playback direction
►1/2 → ►1/4 → ►1/8

Opposite direction
◄1/2 → ◄1/4 → ◄1/8

Note

The scan and slow indicator are displayed approximately.

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Searching for a Title/ Chapter/Track DVD CD

You can search a DVD disc by title or chapter, and you can search a CD by track. As titles and tracks are assigned unique numbers on the disc, you can select the desired one by entering its number. Or, you can search for a scene using the time code. (TIME SEARCH)
When using the remote set DECK A/B select to DECK A.

Number buttons

CLEAR

↑/↓

ENTER
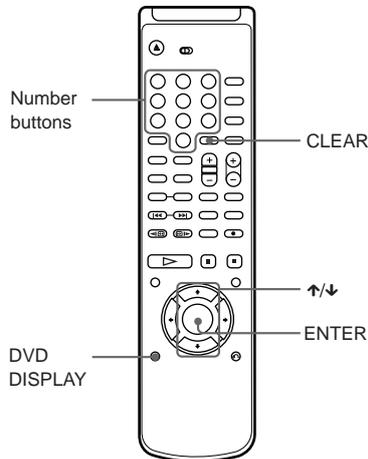
DVD DISPLAY

1 Press DVD DISPLAY.
The Control Menu appears.

2 Press ↑/↓ to select the search method.

■When playing a DVD
(TITLE), (CHAPTER), or (TIME)
Select TIME for TIME SEARCH.

■When playing a CD
(TRACK)

3 Press ←/→ or the number buttons to select the title, chapter, track, or scene number you want to search.

If you make a mistake
Cancel the number by pressing CLEAR, then select another number.

4 Press ENTER.
The recorder starts playback from the selected number.

To turn off the Control Menu
Press DVD DISPLAY.

To search for a scene using the time code (TIME SEARCH) (DVD only)

1 In Step 2, select ⏰ 0:16:57 (TIME).
The time display changes to "--:--:--."

2 Input the time code using the number buttons, then press ENTER.
For example, to find the scene at 2 hours, 10 minutes, and 20 seconds after the beginning, just enter "2:10:20."

Note

The title, chapter or track number displayed is the same number recorded on the disc.

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Using the Setup Display

DVD   CD

By using the Setup Display, you can make various adjustments to items such as picture and sound. You can also set a language for the subtitles and the Setup Display, among other things.

DVD
DISPLAY

↑/←/→/↓
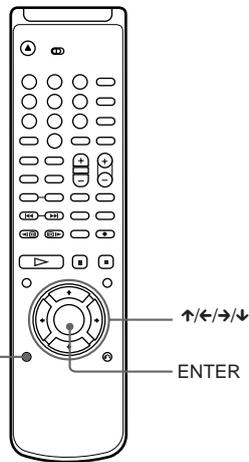
ENTER

Selection of initial settings

1 **Press DVD DISPLAY during playback or in the stop mode.**

The setup menu is displayed.

2 **Press ↑/↓ to select ▣ SETUP (SETUP) then press ENTER.**

The SETUP Menu is displayed.

Disc Audio	✓Original
Disc Subtitle	English
Disc Menu	French
Menu Language	German
Rating	Spanish
Password	Italian
	Chinese
TV Aspect	Polish
	Hungarian
Others	Russian
Digital Audio Output	Other - - - -
Press ▲▼ to select	Press ENTER button

The screen will show the current setting for the selected item, and the alternate setting(s).

• Disc Audio : Sets the audio soundtrack language.
• Disc Subtitle : Sets the subtitle language.
• Disc Menu : Sets the language used in the DVD menu screen.
• Menu Language : Sets the language on the setup menu.
• Rating : Sets the preset restriction level for playback. When playing discs with preset restriction level encoding, the unit automatically cuts scenes of excessive violence, etc.
• Password : Sets the password to prevent children from changing the restriction level.
• TV Aspect : Sets the aspect ratio of the TV connected to the recorder.
• Others : Turns on/off the AUDIO DRC (Dynamic Range Control) and vocal.
• Digital Audio Output : Sets the digital audio to be output from the unit according to the type of audio equipment connected to the unit.

3 **Press → and then ↑/↓ to select the desired setting, then press ENTER.**

Some items require additional steps. (See the respective page.)

When the alternate setting is selected the screen returns to the Initial Settings display.

To turn off the SETUP Menu

Press RETURN or ▷ (PLAY).

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Selecting disc languages

This is to select the audio soundtrack language, subtitle language and the language used in title menus or DVD menus which will always be used for every disc to be played back. When you play back a DVD video disc, the DVD player automatically displays the pre-selected subtitle language if it is included on the disc.

1 Follow steps 1 and 2 of "Selection of initial settings" on page 40.
The setup menu is displayed.

2 Press ↑/↓ to select "Disc Audio".

Disc Audio	✓Original
Disc Subtitle	English
Disc Menu	French
Menu Language	German
	Spanish
Rating	Italian
Password	Chinese
	Polish
TV Aspect	Hungarian
	Russian
Others	Other - - - -
Digital Audio Output	
Press▲▼ to select	Press ENTER button

3 Press → and then ↑/↓ to select the desired language and press ENTER.

• Original : The original language of each disc will be selected.
• English : The English will be Selected.
• Other : Another language can be selected. You can input 4-digit language code. (Refer to the language codes on page 62. Press CLEAR if an incorrect language code is entered.)

To turn off the SETUP Menu
Press RETURN or ▷ (PLAY).

Note

If the language selected is not available on the disc, the original language designated by each disc will be selected.

Selecting Disc Subtitle and Disc Menu

You can select the language for Disc Subtitle and Disc Menu at the same method as Selecting disc language.
Refer to "Selecting disc languages" section.

Selecting menu languages

The language used in this setup manu can be changed.

1 Follow steps 1 and 2 of "Selection of initial settings" on page 40.
The setup menu is displayed.

2 Press ↑/↓ to select "Menu Language".

Disc Audio	▶English
Disc Subtitle	Spanish
Disc Menu	French
Menu Language	
Rating	
Password	
TV Aspect	
Others	
Digital Audio Output	
Press▲▼ to select	Press ENTER button

3 Press → and then ↑/↓to select the desired language and press ENTER.
English/Spanish/French:
The setup menu is displayed in the selected language.

To turn off the SETUP Menu
Press RETURN or ▷ (PLAY).

Settings and Adjustment

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Selecting Parental Control Rating Levels

Some DVDs contain a restriction level which enables parents to remove scenes or prevent children from playing the discs. This unit is equipped with a password designed to prevent children from changing the level.

1 **Follow steps 1 and 2 of "Selection of initial settings" on page 40.**
The setup menu is displayed.

2 **Press ↑/↓ to select "Rating".**

Disc Audio	8
Disc Subtitle	7
Disc Menu	6
Menu Language	5
	4
Rating	3
Password	2
TV Aspect	1
Others	√Unlock
Digital Audio Output	
Press ▲▼ to select	Press ENTER button
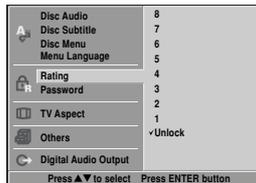
3 **Press → and then ↑/↓ to select the desired restriction level and press ENTER.**
- You cannot play DVD video discs rated higher than the level you selected unless you cancel the parental lock function.
  For example, when you select level 7, discs rated higher than level 7 are blocked and cannot be played.
- The parent lock level is equivalent to the following USA movie ratings.
  Level 7: NC-17   Level 6: R   Level 4: PG 13
  Level 3: PG   Level 1: G
- Some titles do not match with the rating level described as above.

To turn off the SETUP Menu
Press RETURN or ▷ (PLAY).

✧ To cancel the rating, select "Unlock" in step 3.

Setting the Password

A 4-digit password can be set to prevent playing discs with higher rating.

1 **Follow steps 1 and 2 of "Selection of initial settings" on page 40.**
The setup menu is displayed.

2 **Press ↑/↓ to select "Password".**

Disc Audio	New
Disc Subtitle	- - - -
Disc Menu	
Menu Language	
Rating	
Password	
TV Aspect	
Others	
Digital Audio Output	
Press ▲▼ to select	Press ENTER button

3 **Press ENTER.**

4 **Enter a 4-digit password using the number buttons, then press ENTER.**
Example: To set the password, press 1, 2, 3 and 4.
Do not forget your password.
If you enter the wrong number, press CLEAR.

5 **Enter the same 4-digit password again to verify, then press ENTER.**
The password is set.
The rating is locked. Any discs with a higher rating than the setting cannot be played back.

To turn off the SETUP Menu
Press RETURN or ▷ (PLAY).

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To change the rating level

1 Select "Rating" on the setup menu, then press ➔.
2 Enter the password using the number buttons, then press ENTER.
3 Change the rating level, then press ENTER (see page 42).

To change the password

1 Select "Password" on the setup menu, then press ➔.
2 Enter the password using the number buttons, then press ENTER.
3 Select "Change", then press ENTER.
4 Follow steps 3 and 4 of "Setting the Password" on the 42 page.

To clear the password

1 Select "Password" on the setup menu, then press ➔.
2 Enter the password using the number buttons, then press ENTER.
3 Select "Clear", then press ENTER.

If you forget your 4-digit password

1 Select "Password" on the setup menu.
2 Enter the 6-digit number "210499" and press ENTER. The 4-digit password that you entered is cleared.

Selecting TV Aspect

Select the appropriate screen type of your TV: conventional size screen (4:3) or wide-screen (16:9).

1 Follow steps 1 and 2 of "Selection of initial settings" on page 40.

The setup menu is displayed.

2 Press ↑/↓ to select "TV Aspect".

Disc Audio	4:3 Letterbox
Disc Subtitle	4:3 Panscan
Disc Menu	16:9 Wide
Menu Language	
Rating	
Password	
TV Aspect	
Others	
Digital Audio Output	
Press ▲▼ to select	Press ENTER button

3 Press ➔ and then press ↑/↓ to select the desired restriction level and press ENTER.

4:3 Letterbox	Select this when you connect a 4:3 screen TV. Displays a wide picture with bands on the upper and lower portions of the screen.
4:3 Panscan	Select this when you connect a 4:3 screen TV. Automatically displays the wide picture on the entire screen and cuts off the portions that do not fit.
16:9 Wide	Select this when you connect a wide-screen TV or a TV with a wide mode function.

4:3 Letterbox

4:3 Panscan

16:9 Wide

Note

Depending on the DVD, "4:3 Letterbox" may be selected automatically instead of "4:3 Panscan" or vice versa.

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Settings and Adjustment

Others

The settings for AUDIO DRC (Dynamic Range Control) and Vocal can be changed.

1 **Follow steps 1 and 2 of "Selection of initial settings" on page 40.**

The setup menu is displayed.

2 **Press ↑/↓ to select "Others".**

```
        Disc Audio        AUDIO DRC Off
  A↓    Disc Subtitle     Vocal On
        Disc Menu
        Menu Language

  🔒    Rating
        Password

  📺    TV Aspect

  📋    Others

  ↻     Digital Audio Output

        Press ▲▼ to select   Press ENTER button
```

3 **Press → and then press ↑/↓ to select the desired item press ENTER.**

Each you press ENTER, the setting turns "On" or "OFF" in turn.

- **AUDIO Dynamic Range Control (DRC) setting**

When listening at a low volume, Dynamic Range Control reduces the volume of loud sounds such as explosions, etc., and increases the volume of quiet sounds such as whispered dialog, etc.
This function only works for the analog audio output signals (AUDIO OUT of this unit) while playing DVDs recorded with Dolby Digital (AC-3).
AUDIO DRC On: Select this when playing back at low volume.
AUDIO DRC Off: The sound is played back normally.

- **Vocal**

Set to On only when a multi-channel karaoke DVD is being played. The karaoke channels on the disc will then be mixed into a normal stereo sound.
This function works only when "Digital Audio Output" of the setup menu is set to "PCM".

To turn off the SETUP Menu
Press RETURN or ▷ (PLAY).

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Selecting the Digital Audio Output

Each DVD disc has a variety of audio output options. Set the Digital Audio Output of the unit according to the type of audio system you use.

CAUTION

If the AV amplifier is not equipped with a Dolby Digital decoder, do not select "DOLBY DIGITAL/PCM or Stream/ PCM" in the "Digital Audio Output" when connecting the AV amplifier with an optical connecting cord.

Merely attemping to paly a DVD may cause a high level of noise wihch could be harmful to your ears and damage the speakers. In such a case, be sure to select "PCM".

1 Follow steps 1 and 2 of "Selection of initial settings" on page 40.

The setup menu is displayed.

2 Press ↑/↓ to select "Digital Audio Output".

Disc Audio
Disc Subtitle
Disc Menu
Menu Language
Rating
Password
TV Aspect
Others
Digital Audio Output

DOLBY DIGITAL /PCM
Stream/PCM
PCM

Press ▲▼ to select   Press ENTER button
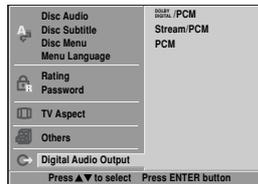
3 Press → and then press ↑/↓ to select the desired output press ENTER.

- **Dolby Digital/PCM**

  Select this when connecting to an AV receiver or other equipment equipped with a Dolby digital (AC-3) decoder or a Dolby Pro Logic Surround decoder.

- **Stream/PCM**

  Select this when connecting to an AV receiver or other equipment euipped with a DTS decoder or an MPEG decoder.

- **PCM**

  Select this when connecting to an audio system without a Dolby Digital(AC-3), DTS or other decoder.

Playable Disc	OUTPUT		
	Stream/ PCM	Dolby Digital/ PCM	PCM
96 kHz Linear PCM DVD	PCM	PCM	PCM
DTS DVD	DTS bit Stream	Not output	Not output
Dolby Digital DVD	Dolby Digital bit Stream	Dolby Digital bit Stream	PCM
MPEG DVD	MPEG bit Stream	PCM	PCM
Audio CD	PCM	PCM	PCM

To turn off the SETUP Menu

Press RETURN or ▷ (PLAY).

Note

- When this recorder is playing a CD that sampling frequency is 96 kHz, the signal of DIGITAL OPTICAL OUT jack is converted and outputed as 48 kHz. And the signal of ANALOG OUT (L/R) jack is converted as analog signal and outputed as 96 kHz.

Settings and Adjustment

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Recording a CD to CD-R or CD-RW disc at Normal Speed CD-R/RW

(Normal Speed Synchro-Recording)
You can easily make digital recordings from a CD to a CD-R, or CD-RW, making track numbers in the same sequence as the original CD.
Before recording, see "Notes" on page 48.
After recording, you must finalize the disc. Until the disc is properly finalized, it cannot be played on any other machine. See "Finalizing CD-R and CD-RW discs" on page 51.
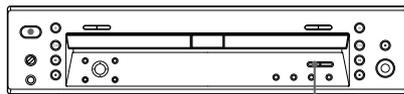
CD SYNCHRO NORMAL
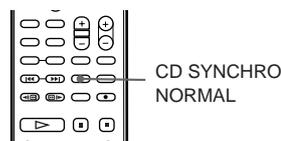
CD SYNCHRO NORMAL

1 Press POWER.

2 Press ⏏ of DECK B and place a recordable CD-R or CD-RW on the disc tray. Press ⏏ of DECK B again to close the disc tray.
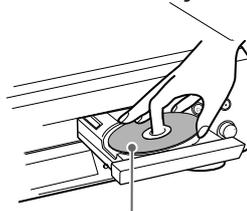
With the label side up

"TOC" starts to flash. The recorder starts to read the TOC (Table of Contents) data and shows the type of the disc in the deck on the front panel display.

3 Press ⏏ of DECK A and place a CD on the disc tray. Press ⏏ of DECK A again to close the disc tray.

4 Press CD SYNCHRO NORMAL.
"CD SYNCHRO" appears and "REC" flashes in the front panel display. And the recorder (DECK B) optimizes itself for the best possible recording and "OPC" appears on the display shortly. DECK A will check that digital recording is available.
DECK B stands by for recording, and DECK A stands by for playing.
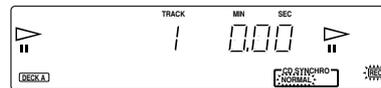
5 If front panel display is displayed as above, it will be ready to record. Press ▷ on the front panel or on the remote to start recording.
Recording starts. DECK A and DECK B will automatically stop after recording.

1 track CD synchro (Normal speed)
During stop, press AMS (|◀◀ /▶▶|) until you find the track after you press CD SYNCHRO NORMAL.

To stop recording
Press ■ .

Notes
• When copying a disc digitally recorded under control of the Serial Copy Management System (SCMS), the recorder automatically select the analog recording. For detailed explanation on SCMS, refer to the "Notes" on page 49.
• When copying a commercial music CD contains copy-prohibit signals, the recorder automatically select the analog recording.

Recording a CD to CD-R or CD-RW disc at High Speed

(High Speed Synchro-Recording)
You can easily make digital recordings from a CD to a CD-R, or CD-RW, faster than normal Synchro-Recording, making track numbers in the same sequence as the original CD.
Before recording, see "Notes" on page 48. After recording, you must finalize the disc. Until the disc is properly finalized, it cannot be played on any other machine. See "Finalizing CD-R and CD-RW discs" on page 51.
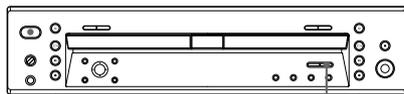
CD SYNCHRO HIGH
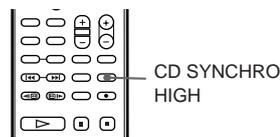
CD SYNCHRO HIGH

1 Press POWER.

2 Press ⏏ of DECK B and place a recordable CD-R or CD-RW on the disc tray. Press ⏏ of DECK B again to close the disc tray.
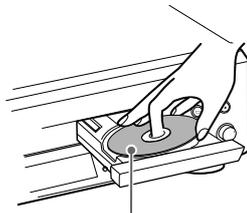
With the label side up

"TOC" starts to flash. The recorder starts to read the TOC (Table of Contents) data and shows the type of the disc in the deck on the front panel display.

3 Press ⏏ of DECK A and place a CD on the disc tray. Press ⏏ of DECK A again to close the disc tray.

4 Press CD SYNCHRO HIGH.

"CD SYNCHRO" appears and "REC" flashes in the front panel display. And the recorder (DECK B) optimizes itself for the best possible recording and "OPC" appears on the display shortly. DECK A will check that digital recording is available.
DECK B stands by for recording, and DECK A stands by for playing.
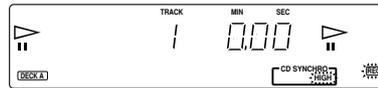
5 If front panel display is displayed as above, it will be ready to record. Press ▷ on the front panel or on the remote to start recording.

High-Speed recording starts. You cannot monitor the recorded signal during recording. DECK A and DECK B will automatically stop after recording.

1 track CD synchro (High speed)

During stop, press AMS (|◄◄ /►►|) until you find the track after you press CD SYNCHRO HIGH.

To stop recording

Press ■ .

Notes

- When copying a disc digitally recorded under control of the Serial Copy Management System (SCMS), the recorder automatically select the analog recording and the recording speed will become normal. For detailed explanation on SCMS, refer to the "Notes" on page 49.
- When copying a commercial music CD contains copy-prohibit signals, the recorder automatically select the analog recording, and the recording speed will become normal.

Recording on CD-R

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- You cannot record over existing material. The recorder automatically starts recording from the end of the existing material.
- Make sure that the remaining recordable time on the CD-R or CD-RW is longer than the playing time of the CD, especially if you want to record all the tracks on the CD.
- You cannot pause recording in Synchro-Recording.
- If you set "Program Play," you cannot use the High Speed Synchro-Recording mode for recording.
- When you select the High Speed Synchro Recording mode during Program Play, the recorder will automatically make a copy at normal speed.
- You cannot use the recording function when you set "Shuffle Play."
- If an error message appears on the front panel display, refer to "Error Messages" on page 55.
- With the following kinds of CDs, you may experience a reading failure or noise when recorded to a CD-R or CD-RW.
- CD with adhesive labels attached to them
- Irregularly shaped CDs (for example, heart or star shaped)
- CDs with printed text concentrated on one side only
- Old CDs
- Scratched CDs
- Dirty CDs
- Warped CDs
- When "TOC WRITE" flashes in the display, the recorder is currently updating the table of contents (TOC). Do not move the recorder or pull out the AC power cord.
- If the following occurs during CD playback or recording, a reading error may occur or noise may be produced in the recorded results:
- The CD tray or other part of the system is bumped.
- The system is placed on an uneven or soft surface.
- The system is located near a speaker, door, or other source of vibration.

Do not disconnect the recorder from the power source immediately after recording.

If you do, recorded material may not be saved to the CD-R or CD-RW. When "BUSY" or "UPDATE" appears in the display, the deck is currently updating track information. When "UPDATE" stops being displayed, it is safe to disconnect the AC power cord.

Recording on a CD-R or CD-RW disc Manually

You can start recording from the end of the existing material.
When using the remote, set SELECT to DECK B for operations on DECK B.
To perform Synchro-Recording, see "Recording a CD to CD-R or CD-RW disc at Normal Speed" on page 46 or "Recording a CD to CD-R or CD- RW disc at High Speed" on page 46.

INPUT   REC ●

REC LEVEL
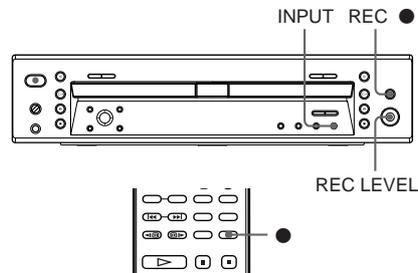
1 Turn on the amplifier and set the input selector to the position for the sound source you want to record.

2 Place a recordable CD-R or CD-RW on DECK B.

3 Press INPUT repeatedly to select the input connector.

To record through	Select
DIGITAL OPTICAL IN	OPTICAL
ANALOG IN	ANALOG

4 Press REC ● .
The recorder stands by for recording.

Note

The manual recrording from DECK A is not available, so use syncro recording method. Refer to page 46-47.

5 Adjust the recording level, if necessary. (ANALOG IN ONLY)

For details, see "Adjusting the Recording Level" below.

6 Press ▷ .

7 Start playing the sound source you want to record.

To pause recording

Press ❚❚ . To resume recording, press the button again or press ▷ .

Note

Whenever you pause recording, a new track number is added. For example, if you paused recording while recording on track 4, the track number increases by one on track 5 and recording continues on the new track when recording is resumed.

To stop recording

Press ■ .

"BUSY", and then "UPDATE" appear while updating the information of the disc before stopping the recording.

Notes

• You cannot operate the DVD/CD player section while the deck is recording or standing by for recording with "OPTICAL" or "ANALOG" selected with the INPUT button.
• If you press the REC button during recording, you can add a track (The track must be longer than 4 seconds).
• Press ❚❚ when the recorder is in standby for recording to add a silent (around 2 seconds) before a song you are recording. The recorder automatically enters standby again.
• This recorder uses the Serial Copy Management System(SCMS), which allows only first-generation digital copies to be made of premastered software via the recorder's digital input. Therefore you may not be able to record a CD-R or CD-RW digitally through OPTICAL IN, depending on the content being record.

Auto/Manual Track Increment

Press LEVEL SYNC to select how tracks will be numbered on the recorded disc.

LEVEL SYNC
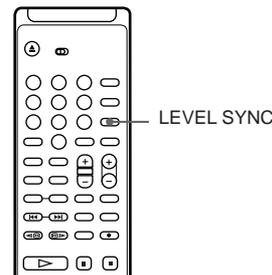
• The Auto mode will add track numbers automatically, in one of two ways. When track data is present from a digital recording, it will be carried over to the new copy disc. Thus, when the CD being played moves from one track to the next track, the copy disc will also increase the track number by one.
• In the Auto mode for recordings from an analog source or a digital source with no track data, the track number will be increased when the recorder receives silence for 3 seconds.
  After 20 seconds of silence, the recording will automatically stop.
• To activate the Auto mode, press the LEVEL SYNC once and note that the L.SYNC goes out.
  In that mode for either digital or analog recordings, you must add track numbers manually by pressing REC ● when you wish to increase the track number.
• The Digital In source with track data will be recorded not concerned with LEVEL SYNCH ON/OFF according to track data.
• When the power is turned on, LEVEL SYNC is activated automatically and the L.SYNC indicator will light in the front panel display.

Recording on CD-R

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Checking the Remaining Recordable Time

When you placed an unfinalized CD-R or CD-RW in the DECK B, you can also check the remaining recordable time. The information appears as follows:
When using the remote, set DECK A/B switch to DECK B for operations on DECK B.
Each time you press TIME, front panel display is changed as below.

The total track number and total playing time are displayed

The total track number and the remaining recordable time are displayed.

On the TOC and CD-R/RW indicator

The CD-R/RW indicator shows which type of recordable disc is in DECK B, and whether the recordable disc has been already finalized.
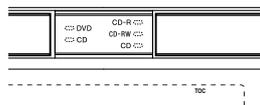
The CD-R/RW indicator
When you put an unfinalized CD-R disc in the disc tray, the CD-R indicator lights up. When you put a CD-RW disc in the disc tray, the CD-RW indicator lights up, and it does not matter if the disc has not been finalized.

The TOC indicator
When you put an unfinalized CD-R/RW disc in the disc tray, the TOC indicator lights up in the front panel display.

Note
When you put a CD or finalized CD-R disc in a disc tray, the CD indicator lights up,

Adjusting the Recording Level (ANALOG IN only)

You can adjust the recording level using the REC LEVEL control on the front panel. Adjust the recording level so that the "OVER" indicator on the level is not normally appears.

The "OVER" indicator

If rec level is too loud, "OVER" appears in the front panel display.

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Finalizing a CD-R or CD-RW disc

Finalizing completes the recording of a disc. It enables you to play the disc on other players. (The player must be CD-RW compatible.)
When a recording is finished, a CD-R or CD-RW disc must be finalized. Once that is done, a CD-R disc may not be changed or added to.
CD-RW discs are locked once they are finalized, and must be unfinalized to permit additional recording or erasure.
When using the remote, set DECK A/B switch to DECK B for operations on DECK B.

FINALIZE

FINALIZE

1 Press FINALIZE.
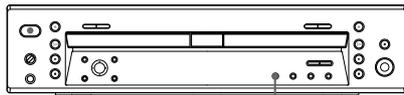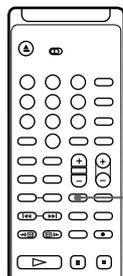
The "FINALIZE" indicator will begin to flash, and the PLAY, PAUSE, and REC indicators light up for about 8 seconds. Erasing enters standby mode.

2 Press ▷ while the "FINALIZE" indicator is flashing.

Finalizing starts. During finalizing, " TOC WRITE" appears in the display and the remaining time for finalizing appears in the display. When the finalizing process is finished, the total track number and the total playing time appear in the display and the TOC (red) indicator lights off.

Notes

- The TOC (red) indicator appears on the front panel display if the disc you put in DECK B has not been finalized. Check the indicator each time before finalizing.
- Once finalizing process starts, you cannot stop in the middle of the process.
- Do not turn off the recorder or disconnect the recorder from the AC power source in the middle of the finalizing process.

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Unfinalizing a CD-RW disc

A CD-RW disc is both recordable and rewritable. However, the process of rewriting or erasing is different from of cassette tapes.

Unfinalizing a CD-RW disc

A finalized CD-RW is neither recordable nor rewritable. If you want to add new tracks or erase single tracks, you must first unfinalize the disc.

When using the remote, set DECK A/B switch to DECK B for operations on DECK B.
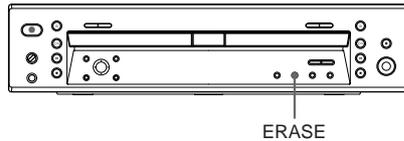
ERASE
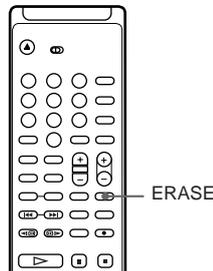
ERASE

1 Press the ERASE button twice.

The "UNFINALIZE" indicator begins to flash, and the PLAY, PAUSE, and REC indicators light up for about 8 seconds.

Unfinalizing enters standby mode.

2 Press ▷ while the "UNFINALIZE" indicator is flashing.

Unfinalizing starts. During unfinalizing, "TOC ERASE" appears in the display and the remaining time for unfinalizing appears in the display. When the unfinalizing process is finished, the total track number and the total playing time appears in the display and the TOC (red) indicator lights up.

Notes

- The TOC (red) indicator appears on the front panel display if the disc you put in DECK B has not been finalized. Check the indicator each time before unfinalizing.
- Once the unfinalizing process starts, you cannot stop in the middle of the process.
- Do not turn off the recorder or disconnect the recorder from the AC power source in the middle of the unfinalizing process.
- A unfinalized discs can be played back only in DECK B.

## Erasing a single track of CD-RW disc

You can erase one track on a CD-RW at a time. This process starts with the last track on the disc. Please note that before erasing a track, you must unfinalize the disc. If the disc is not unfinalized, follow the instructions of "Unfinalizing a CD-RW disc" (page 52).
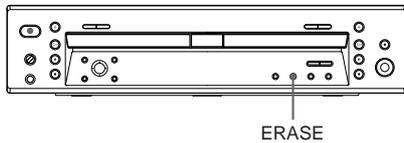
ERASE

1 Press the ERASE button.

The "LAST TR. ERASE" indicator will begin to flash, and the PLAY, PAUSE, and REC indicators light up for about 8 seconds. Erasing enters in standby mode.

2 Press ▷ while "LAST TR ERASE" is flashing.

The last track erasing starts. During the last track erasing, "LAST TR. ERASE" appears in the display and the remaining time for erasing the last track appears in the display. When this process is finished, the total track number and the total playing time appears in the display.

Notes

• Once erasing process starts, you cannot stop in the middle of the process.
• Do not turn off the recorder or disconnect the recorder from the AC power source in the middle of the erasing process.

Erasing an Entire CD-RW disc

Erasing the entire contents of a CD-RW disc is easy, and it does not matter whether the disc has been unfinalized or not.
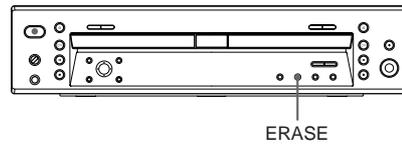
ERASE

1 Press ERASE one time (for a finalized disc) or twice (for unfinalized disc) until "DISC ERASE" appears in the front panel display.

The "DISC ERASE" indicator will begin to flash, and the PLAY, PAUSE, and REC indicators light up for about 8 seconds.
Entire disc erasing enters in the standby mode.

2 Press ▷ while "DISC ERASE" is flashing.

Entire disc erasing starts. During erasing, "DISC ERASE" appears in the front panel display and the remaining time for entire disc erasing appears in the display. When this process is finished, "0 0:00" appears in the display.

Notes

• Once entire disc erasing process starts, you cannot stop the erasing in the middle of the process.
• Do not turn off the recorder or disconnect the recorder from the power source in the middle of the erasing process.

Recording on CD-R

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Controlling the TV with the Supplied Remote

You can control your SONY TV with the supplied remote.
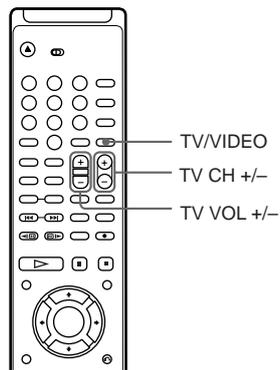
TV/VIDEO
TV CH +/–
TV VOL +/–

Controlling TVs with the remote

You can control your TV using the buttons below.

By pressing	You can
TV/VIDEO	Switch the TV's input source between the TV and other input sources.
TV VOL +	TV volume up
TV VOL –	TV volume down
TV CH +	TV channel up
TV CH –	TV channel down

Depending on the TV, you may not be able to control your TV or to use some of the buttons above.

Error Message

The following table explains the error messages that appear in the display.

CHECK DISC

➡ A record-related button has been pressed when a finalized disc is in the DECK B.

➡ A record-related button has been pressed when a standard CD is in the DECK B.

➡ An unplayable disc (CD-ROM, Video CD etc.) is inserted.

DATA DISC

➡ A non-audio CD-ROM or a CD-Video disc has been placed in the machine.

DISC ERROR

➡ An unfinalized disc has been placed in the DECK A.

➡ A DVD disc has been placed in the DECK B .

➡ The disc is not seated properly.

➡ There is a problem with the disc.

DISC FULL

➡ There is not enough time left on the disc to complete a planned recording.

ERROR

➡ The disc tray is not seated properly.

NO AUDIO

➡ A record-related button has been pressed when a non-audio disc is in the DECK B.

CAN NOT COPY

➡ A recording is not possible due to the Serial Copy Management System (SCMS).

UNLOCK

➡ There is not source for recording through DIGITAL OPTICAL IN jack.

NO DISC

➡ No disc is inserted in the recorder.

System Limitations

"TOC" appears for a long time

If the inserted recordable CD-R/RW is brand new, "TOC" appears in the front panel display longer than for CD-R/RWs that have been used.

Limitations when recording over an existing track

• The correct remaining recording time may not be displayed.

• You may find it impossible to record over a track if that track has been recorded over several times already.

• The remaining recording time may be shortened out of proportion to the total recorded time.

• Recording over a track to eliminate noise is not recommended since this may shorten the duration of the track.

• You may find it impossible to label a track after recording over a previous one.

• You can record songs for up to 99 tracks.

Additional Information

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Troubleshooting

If you experience any of the following difficulties while using the system, use this troubleshooting guide to help remedy the problem before requesting repairs. Should any problem persist, consult your nearest Sony dealer.

Power

The power is not turned on.
➡ Check that the AC power cord is connected securely.

Picture

There is no picture.
➡ The connecting cords are not connected securely.
➡ The connecting cords are damaged. Replace it with a new one.
➡ The recorder is not connected to the correct TV input jack (page 15-16).
➡ The video input on the TV is not set so that you can view pictures from the system.

Picture noise appears.
➡ The disc is dirty or flawed. Clean the disc.
➡ If the picture output from your system goes through your VCR to get to your TV, the copy-protection signal applied to some DVD programs could affect picture quality. If you still experience problems even when you connect your system directly to your TV, try connecting your system to your TV's S-video input (page 16).

Even though you set the TV aspect in SETUP menu, the picture does not fill the screen.
➡ The aspect ratio of the disc is fixed on your DVD.

The picture is black and white.
➡ Depending on the TV, the picture on the screen becomes black and white when you play a disc recorded in the PAL or SECAM color system.

Sound

There is no sound.
➡ The connecting cord is not connected securely.
➡ Make sure you connect the recorder to the audio input connectors on the amplifier (page 17-20) or on the TV (page 15-16).
➡ Make sure you select the appropriate position on the amplifier so that you can listen to the sound from the recorder.
➡ Make sure you select you turn on the TV and the amplifier.
➡ The protective device on the recorder has been activated because of a short circuit. Turn off the system, eliminate the short-circuit problem and turn on the power again.
➡ The audio connecting cord is damaged. Replace it with a new one.
➡ The system is in pause mode or in Slow-motion Play mode. Press ▷ to return to normal play mode.
➡ Fast forward or fast reverse is performed. Press ▷ to return to normal play mode.
➡ When you play the Dolby Digital (AC-3) sound tracks and attempt to output from the DIGITAL OUT connectors, set "DIGITAL AUDIO OUTPUT" to "DOLBY DIGITAL/PCM" in the setup display. Otherwise no sound will come out from the DIGITAL OUT connector. (page 17-18, 45)

Severe hum or noise is heard.
➡ Check that the speakers and components are connected securely.
➡ Check that the connecting cords are away from a transformer or motor, and at least 3 meters (10 feet) away from a TV set or fluorescent light.
➡ Move your TV away from the audio components.

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➡ The plugs and jacks are dirty. Wipe them with a cloth slightly moistened with alcohol.

➡ Clean the disc.

The sound loses stereo effect when you play a CD.

➡ Set "AUDIO" to "STEREO" in the Control Menu display (page 31).

➡ Make sure you connect the recorder appropriately.

The surround effect is difficult to hear when you are playing a Dolby Digital sound track.

➡ Depending on the DVD, the output signal may not be the entire 5.1 channel but monaural or stereo even if the sound track is recorded in Dolby Digital format.

Operation

The remote does not function.

➡ There are obstacles between the remote and the system.

➡ The distance between the remote and the system is too far.

➡ The remote is not pointed at the remote sensor on the system.

➡ The batteries in the remote are weak.

The disc does not play.

➡ There is no disc inside.

➡ The disc is turned over.
Insert the disc with the playback side facing down on the disc tray.

➡ The disc is skewed.

➡ The recorder cannot play CD-ROMs, etc.

➡ The region code on the DVD does not match the system.

➡ Moisture has condensed inside the system.
Remove the disc and leave the system turned on for about half an hour.

The disc does not start playing from the beginning.

➡ Resume Play has been selected.
During stop, press ■ on the system or the remote and then start DVD playback (page 26).

➡ The title or DVD menu automatically appears on the TV screen.

The recorder starts playing the disc automatically.

➡ The DVD features an auto playback function.

Playback stops automatically.

➡ Some discs may contain an auto pause signal. While playing such a disc, the system stops playback at the auto pause signal.

You cannot perform some functions such as Stop, Search, Slow-motion Play, Repeat Play, Shuffle Play, or Program Play.

➡ Depending on the disc, you may not be able to do some of the operations above. See the operating manual that comes with the disc.

The language for the sound track cannot be changed.

➡ Multilingual tracks are not recorded on the DVD being played.

➡ The DVD prohibits changing the language for the sound track.

The subtitle language cannot be changed.

➡ Multilingual subtitles are not recorded on the DVD being played.

➡ The DVD prohibits changing the subtitles.

The subtitle cannot be turned off.

➡ The DVD prohibits turning off subtitles.

Additional Information

continued

The angles cannot be changed.

➡ Multi-angles are not recorded on the DVD being played. The angle can be changed only when the "ANGLE" indicator flash on the front panel display.

➡ The DVD prohibits changing the angles.

The system does not operate properly.

➡ If static electricity, etc., causes the system to operate abnormally, press POWER to turn the system off and then on again.

DECK B (the CD-R and CD-RW recording section)

The recorder does not operate or operates poorly.

➡ The CD-R or CD-RW may be damaged. Replace the disc.

The recorder does not play back

➡ Moisture has formed inside the recorder. Take the disc out and leave the recorder in a warm place for several hours until the moisture evaporates.

➡ Press POWER to turn the recorder on.

➡ Place the CD-R or CD-RW with the label side up.

➡ Replace the CD-R or CD-RW with one that has been recorded.

The recorder does not record

➡ The CD-R or CD-RW is finalized. Unfinalize (for CD-RW only) the disc and try again.

➡ Make connections properly to the sound source.

➡ The sound source is not connected to the selected input connector. Select the correct input connector using INPUT.

➡ The recording level is not adjusted properly. Adjust the recording level properly.

➡ There has been a power failure or the AC power cord has been disconnected during recording. Data recorded to that point may be lost.

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Glossary

Bit rate

Value indicating the amount of video data compressed in a DVD per second. The unit is Mbps (Mega bit per second). 1 Mbps indicates that the data per second is 1,000,000 bits. The higher the bit rate is, the larger the amount of data. However, this does not always mean that you can get higher quality pictures.

Chapter

Sections of a picture or a music piece on a DVD that are smaller than titles. A title is composed of several chapters. Each chapter is assigned a chapter number enabling you to locate the chapter you want.

Dolby Digital

This sound format for movie theaters is more advanced than Dolby Pro Logic Surround. In this format, the rear speakers output stereo sound with an expanded frequency range and a subwoofer channel for deep bass is independently provided. This format is also called "5.1" because the subwoofer channel is counted as 0.1 channel (since it functions only when a deep bass effect is needed). All six channels in this format are recorded separately to realize superior channel separation. Furthermore, since all the signals are processed digitally, less signal degradation occurs.

Dolby Pro Logic Surround

As one method of decoding Dolby Surround, Dolby Pro Logic Surround produces four channels from two-channel sound. Compared with the former Dolby Surround system, Dolby Pro Logic Surround reproduces left-to-right panning more naturally and localizes sounds more precisely. To take full advantage of Dolby Pro Logic Surround, you should have one pair of rear speakers and a center speaker. The rear speakers output monaural sound.

DTS

Digital audio compression technology that the Digital Theater Systems, Inc. developed. This technology conforms to 5.1-channel surround. The rear channel is stereo and there is discrete subwoofer channel in this format. DTS provides the same 5.1 discrete channels of high quality digital audio. The good channel separation is realized because the all channel data is recorded discrete and processed in digital.

DVD

A disc that contains up to 8 hours of moving pictures even though its diameter is the same as a CD.
The data capacity of a single-layer and single-sided DVD, at 4.7 GB (Giga Byte), is 7 times that of a CD. Furthermore, the data capacity of a dual-layer and single-sided DVD is 8.5 GB, a single-layer and double-sided DVD 9.4 GB, and a dual-layer and double-sided DVD 17 GB.
The picture data uses the MPEG 2 format, one of the worldwide standards of digital compression technology. The picture data is compressed to about 1/40 of its original size. The DVD also uses the variable rate coding technology that changes the data to be allocated according to the status of the picture.
The audio data is recorded in Dolby Digital as well as in PCM, allowing you to enjoy more real audio presence.

Additional Information

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Furthermore, various advanced functions such as the multi-angle, multilingual, and Parental Control functions are provided with the DVD.

Multi-angle function

Various angles, or viewpoints of the video camera, for a scene are recorded on some DVDs.

Multilingual function

Several languages for the sound or subtitles in a picture are recorded on some DVDs.

Parental Control

A function of the DVD to limit playback of the disc by the age of the users according to the limitation level in each country. The limitation varies from disc to disc; when it is activated, playback is completely prohibited, violent scenes are skipped or replaced with other scenes and so on.

Region Code

This system is used to protect copyrights. A region number is allocated on each DVD system or DVD disc according to the sales region. Each region code is shown on the system as well as on the disc packaging. The system can play the discs that match its region code. The system can also play discs with the "⊕" mark. Even when the region code is not shown on the DVD, the region limit may still be activated.

Title

The longest sections of a picture or a music piece on a DVD; a movie, etc., for a picture piece on video software; or an album, etc., for a music piece on an audio software. Each title is assigned a title number enabling you to locate the title you want.

Track

Sections of a picture or a music piece on a CD. Each track is assigned a track number enabling you to locate the track you want.

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Specifications

DECK A (the CD/DVD player section)

System	CD/DVD player
Laser	Semiconductor laser
Signal format system	NTSC
Playable discs	DVD, CD, CD-R/CD-RW (for music use), MP3 disc
Frequency response	DVD (PCM 96 kHz): 20 Hz to 44 kHz (±1.0 dB)
	DVD (PCM 48 kHz): 20 Hz to 22 kHz (±0.5 dB)
	CD: 20 Hz to 20 kHz (±0.5 dB)
Signal-to-noise ratio	More than 100dB (ANALOG OUT connectors only)
Harmonic distortion	Less than 0.015%
Dynamic range	More than 95 dB (DVD)
	More than 95 dB (CD)
Wow and flutter	Less than detected value (±0.001% W PEAK)
Outputs	
VIDEO OUT	1.0 Vp-p 75 ohms, sync negative
S-VIDEO OUT	Luminance signal: 1.0 Vp-p, 75 ohms C: 0.3 Vp-p, 75 ohms
COMPONENT VIDEO OUT	Y: 1.0 Vp-p, 75 ohms, sync negative
(Phono jacks)	C_B/B-Y, C_R/R-Y: 0.7 Vp-p, 75 ohms

DECK B (the CD-R and CD-RW recording section)

System	Compact disc digital audio system
Laser	Semiconductor laser
Playable discs	CD, CD-R, CD-RW (for music use)
Frequency response	20 Hz to 20,000 Hz (±0.5 dB)
Signal-to-noise ratio	Over 100 dB during playback
Dynamic range	More than 95 dB during playback
Input	
ANALOG IN (Phono jacks)	Impedance 47 kilohms, Rated input 330 mVrms
DIGITAL OPTICAL IN	Optical wavelength 660 nm
(Square optical connector jack)	

Outputs

ANALOG OUT (Phono jacks)	Impedance 47 kilohms, Rated input 2 Vrms
	Load impedance over 10 kilohms
DIGITAL OPTICAL OUT	Wavelength 660 nm
(Square optical connector jack)	Output level -18 dBm
PHONES (Phone jacks)	28 mW, 32 ohms

General

Power requirements	120 V AC, 60 Hz
Power consumption	25W (120 V AC)
Dimensions (approx.)	$430 \times 107.5 \times 370$ mm (w/h/d) incl. projecting parts
Mass (approx.)	5.1 kg

Supplied accessories

See page 13.

Design and specifications are subject to change without notice.

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Additional Information

Language Code List

The language spellings conform to the ISO 639: 1988 (E/F) standard.

Code	Language	Code	Language	Code	Language	Code	Language
1027	Afar	1183	Irish	1347	Maori	1507	Samoan
1028	Abkhazian	1186	Scots Gaelic	1349	Macedonian	1508	Shona
1032	Afrikaans	1194	Galician	1350	Malayalam	1509	Somali
1039	Amharic	1196	Guarani	1352	Mongolian	1511	Albanian
1044	Arabic	1203	Gujarati	1353	Moldavian	1512	Serbian
1045	Assamese	1209	Hausa	1356	Marathi	1513	Siswati
1051	Aymara	1217	Hindi	1357	Malay	1514	Sesotho
1052	Azerbaijani	1226	Croatian	1358	Maltese	1515	Sudanese
1053	Bashkir	1229	Hungarian	1363	Burmese	1516	Swedish
1057	Byelorussian	1233	Armenian	1365	Nauru	1517	Swahili
1059	Bulgarian	1235	Interlingua	1369	Nepali	1521	Tamil
1060	Bihari	1239	Interlingue	1376	Dutch	1525	Telugu
1061	Bislama	1245	Inupiak	1379	Norwegian	1527	Tajik
1066	Bengali; Bangla	1248	Indonesian	1393	Occitan	1528	Thai
1067	Tibetan	1253	Icelandic	1403	(Afan)Oromo	1529	Tigrinya
1070	Breton	1254	Italian	1408	Oriya	1531	Turkmen
1079	Catalan	1257	Hebrew	1417	Punjabi	1532	Tagalog
1093	Corsican	1261	Japanese	1428	Polish	1534	Setswana
1097	Czech	1269	Yiddish	1435	Pashto; Pushto	1535	Tonga
1103	Welsh	1283	Javanese	1436	Portuguese	1538	Turkish
1105	Danish	1287	Georgian	1463	Quechua	1539	Tsonga
1109	German	1297	Kazakh	1481	Rhaeto-Romance	1540	Tatar
1130	Bhutani	1298	Greenlandic			1543	Twi
1142	Greek	1299	Cambodian	1482	Kirundi	1557	Ukrainian
1144	English	1300	Kannada	1483	Romanian	1564	Urdu
1145	Esperanto	1301	Korean	1489	Russian	1572	Uzbek
1149	Spanish	1305	Kashmiri	1491	Kinyarwanda	1581	Vietnamese
1150	Estonian	1307	Kurdish	1495	Sanskrit	1587	Volapük
1151	Basque	1311	Kirghiz	1498	Sindhi	1613	Wolof
1157	Persian	1313	Latin	1501	Sangho	1632	Xhosa
1165	Finnish	1326	Lingala	1502	Serbo-Croatian	1665	Yoruba
1166	Fiji	1327	Laothian	1503	Singhalese	1684	Chinese
1171	Faroese	1332	Lithuanian	1505	Slovak	1697	Zulu
1174	French	1334	Latvian; Lettish	1506	Slovenian		
1181	Frisian	1345	Malagasy			1703	Not specified

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DVD Setup Menu List

You can set the following items with the DVD setup menu.
The order of the displayed items may be different from the actual display.

CUSTOM SETUP

- Disc Audio —————— (Select the language you want to use from the displayed language list.)

- Disc Subtitle ————— (Select the language you want to use from the displayed language list.)

- Disc Menu ————— (Select the language you want to use from the displayed language list. When you select ORIGINAL, you can enjoy the language given priority on the disc.)

- Menu Language —— (Select the language you want to use from the displayed language list. When you select AUDIO FOLLOW, the setting is automatically switched to the language selected in AUDIO.)

- Rating
  - 8.
  - 7.   NC17
  - 6.   R
  - 5.
  - 4.   PG13
  - 3.   PG
  - 2.
  - 1.   G
  - Unlock

- Password
  - New
  - Change
  - Clear

- TV Aspect
  - 4: 3 Letterbox
  - 4: 3 Panscan
  - 16 : 9 Wide

- Others
  - AUDIO DRC
    - On
    - Off
  - Vocal
    - On
    - Off

- Digital Audio Output
  - DOLBY DIGITAL/PCM
  - Stream/PCM
  - PCM

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